

# Local Leaders

HEALTHIER COMMUNITIES  
THROUGH DESIGN



THE AMERICAN INSTITUTE OF ARCHITECTS

# ABOUT

## The American Institute of Architects (AIA)

Founded in 1857, the AIA is the leading professional membership association for licensed architects, emerging professionals, and licensed partners. The AIA has more than 80,000 members and nearly 300 state and local chapters. The AIA serves as the voice of the architecture profession and a resource for its members in service to society; it carries out its goal through advocacy, information, and community. Through various programs and initiatives, the AIA brings together architects and other professionals from across the country to provide direction for communities seeking to improve their sustainability. The American Institute of Architects drives positive change through the power of design.

Local Leaders: *Healthier Communities Through Design* is the seventh in a series of AIA reports on livable, sustainable communities.

[www.aia.org/localleaders](http://www.aia.org/localleaders)

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# Foreword



*Richard J. Jackson, MD MPH FAAP*

Vitruvius taught that buildings must be strong, useful and artful. And, 1500 years later Leonardo drew his “Vitruvian” man to apprise us of the beautiful geometry of the human form and its ideal symmetry to physical space. Our bodies, our health and buildings are forever connected. The links between architecture and well-being are richer than merely affording safety from injury; buildings can be, should be, agents of health – physical, mental and social health. Good buildings and urban plans do precisely that. A bad structure removes daylight, damages air quality, allows water and noise intrusion, and leaves little room for what makes us happy – being with people we enjoy, good and healthy food, pleasing sight lines, and safety and security.

Architecture is of course about executing the architect’s vision within constraints of the site, the budget and the climate, but it also must be about human well-being and happiness. This has always been true, but never has this need been more urgent than today. Humanity faces powerful challenges, a “perfect storm” of colliding dangerous forces, namely accelerating climate change, resource depletion and population pressure, and staggering harm and costs from an inundation of chronic diseases like diabetes. These are perilous threats to society at large, but equally to the profession of architecture.

With the immense infusion of carbon into the atmosphere (the CO<sub>2</sub> level has gone from 300 to 400 ppm in my lifetime) scientists and recently the World Bank are documenting climate changes and the reality of sea level rise, a hotter and far more energetic and water-varying atmosphere, human casualties and other health threats, and massive financial costs. Past building and urban forms will fail. Our buildings must be more resilient in the face of temperature, wind and water forces, and resistant to power and other failures. The future will be where every neighborhood has resilient and sheltering buildings.

In the lifetimes of today’s “baby boomers” the population of the planet has gone from 2.3 billion to 7.1 billion, and developing nations are demanding catch-up access to resources from water and land to concrete and oil. The era of low cost building materials is over and waste will not be merely prohibited but prohibitive. Our grandchildren will be amazed to hear that we irrigated lawns and flushed toilets with drinking water, looked through single-pane windows, and failed to use the sunlight on the roof.

And, the third tempest, the immense increase in costly chronic diseases, threatens to undermine the economy and will render most medical treatments costly and inadequate. The obesity and inactivity epidemics, aside from the predictable changes from an aging population and more costly

## FOREWORD *Continued*

medical treatments, are and will be presenting astonishing medical bills. Already 18 percent of the U.S. GDP is being consumed by medical care, and as a society we are only beginning to confront the costs of the doubling of just this one disease – diabetes. Diabetes alone now costs two percent of the GDP. This epidemic is driven by the 25 pound increase in the weight of the average American adult over 25 years that now has 2/3 of the U.S. adults overweight or obese. And, while changes in diet are urgently needed, so is a major increase in the physical activity of Americans, especially walking. Being out of shape and unfit is as big a health risk as obesity.

Architects must understand that the medical system alone is unable to manage these health threats and that just as we design resilience into our buildings, we must design health into our buildings. There is no one formula to do this, but a good start would be placing buildings in neighborhoods with sidewalks, near parks, schools and places with good access to healthy food. By creating health-giving buildings that reward and encourage stair-climbing, by making spaces that encourage and welcome social interaction, by having building areas that have secure bicycle parking and showers that support active travel, by de-emphasizing nearby parking, and finally by the creation of lively spaces with good “eyes on the street”, architects will help us all to be healthier and happier.

Architects cannot stop the perfect storm, but architects are crucial in preparing us for one, and to help prevent avoidable misery by reconnecting health to our buildings.

Richard J. Jackson, MD MPH FAAP

*Richard J. Jackson is Professor and Chair of Environmental Health Sciences at the Fielding School of Public Health at UCLA. A pediatrician, he has served in leadership positions in environmental health and in infectious disease with the California Health Department, including the highest, State Health Officer. For nine years he served as Director of the CDC's National Center for Environmental Health and received the Presidential Distinguished Service Award. He is an elected member of the Institute of Medicine of the National Academy of Sciences.*

# Executive Summary

When people think of health, often the first thing that comes to mind is the medical industry and treating illness when individuals are unwell. However, architects can help create healthier communities. Preventative strategies for improving health can be designed into our cities, helping people from becoming sick in the first place. Promoting development patterns that are more compact and closer to transit, shopping, restaurants, social services, and community amenities is the first part of a comprehensive, systems-level solution. Active lifestyles rely in large part on expanding the options for when, where, and how people can live, work, and play. These strategies also result in environmental and economic benefits.

*Local Leaders – Healthier Communities Through Design* is an examination of the positive impacts design can have on health. Health is a fundamental property of humanity, and is expressed across a multitude of social, economic, and environmental indicators, all of which can be influenced directly through urban design and architecture. Key barometers of health suggest America is heading in the wrong direction, namely toward physical inactivity, obesity, and chronic diseases. The economic costs of this trend are enormous, the scale of which is clearly illustrated by ever-expanding U.S. healthcare costs. As healthcare costs rise precipitously – estimated to reach an astounding 20 percent of GDP by 2020 – every sector of the economy faces tough questions about continuing to manage this problem that touches every citizen. With such far-reaching implications, the consideration of health through the tactics of design can only be one place to start, but it is a critical area to consider.

America ranks first worldwide in per capita spending on healthcare. Changes in culture are a big contributor: people have more opportunities than ever to eat unhealthy foods and live more sedentary lives. The United States now has the highest rate of obesity in the world, mainly as a result of inadequate physical activity. Currently, only 40 percent of adults and 29 percent of adolescents meet the U.S. Centers for Disease Control and Prevention (CDC) recommendations for physical activity. In the last 20 years, the incidence of adult obesity has risen dramatically to reach more than one-third of the population. Over the past four decades, the rate of childhood obesity has quadrupled. The rate of obesity for adolescents is even higher. If these trends continue, it is estimated that 42 percent of Americans will be obese by 2030.

America is not only getting heavier, but our rising rates of obesity are also becoming a serious public health issue. Lack of adequate physical activity and obesity eventually lead to chronic disease. The CDC estimates that three quarters of U.S. spending on health care currently goes toward treating chronic

diseases. Chronic diseases are now also the leading cause of death and disability in the U.S., with 70 percent of all deaths attributed to chronic disease. Design interventions that create healthier communities can make an enormous difference in outcomes, leading to great reductions in chronic disease.

Aside from inactivity and obesity, environmental pollution is another important challenge that can be addressed by creating healthier buildings and communities. Poor indoor and outdoor air quality in particular has been linked to four major health threats: increased mortality, respiratory illnesses, impaired cardiovascular function, and increased risk of cancer. These public health challenges can be addressed by designing communities that promote active transportation and well-ventilated, resource-efficient buildings that improve air quality for those who are most in need, and everyone else.

The creation of healthier communities through design will lead to stronger, more economically resilient cities and towns. Promoting development patterns that are more compact and closer to transit, shopping, restaurants, social services, and community amenities is a key part of the solution. Twelve studies focused on livable, mixed use communities, which compared the behavior of residents in car-centric areas with those in urban communities, found that the median improvement in some aspect of physical activity for livable urban communities was over 160 percent. Additionally, a man of average height and weight weighed 10 pounds less if he lived in a walkable community. A woman in that same community weighed on average six pounds less. Designing communities for positive health outcomes pays dividends across the spectrum for individuals, business, and society at large.

The case studies in *Local Leaders – Healthier Communities Through Design* examine a broad range of challenges and opportunities related to design and health. They offer regional diversity and show a wide variety of successful policies currently pursued across the country to improve public health. Insights and best practices from the following cities, all of which are included in this report, also represent public policy choices available to local officials in communities of all shapes and sizes:

- **New York City** – A city-wide conversation promoting healthier design through the Active Design Guidelines, Fit-City conferences, and innovative urban design;
- **Los Angeles** – Advancing active mobility and healthier growth through living streets, public transit, and healthier community design with innovative policies and initiatives;
- **Nashville** – A firm commitment to become the healthiest city in the South by creating an active culture, improving access to fresh foods, and promoting healthier transportation within and across neighborhoods;
- **Milwaukee** – Revitalizing blighted brownfields for thriving light industry, healthier buildings, and neighborhood access to active recreation;
- **Boston** – Designing healthier, high-performance green affordable housing for better air quality;
- **Portland** – Creating communities for all ages with policy decisions that promote mobility, accessibility, and family-oriented affordable housing options;
- **Austin** – Developing complete, more active communities through complete streets, better neighborhood design, and health-promoting public spaces; and
- **Seattle** – Envisioning the future through a health-promoting EcoDistrict with healthier buildings, better mobility, improved access to fresh foods, and more social equity.

Public policy decisions make a difference. Community leaders have significant opportunities to improve public health in the coming years, and this report serves as a toolkit for local leaders who would like to implement policies that will help create healthier communities. There are many proactive stances and policy decisions that can be made now to ensure success in the future. Local

leaders who are committed to working with architects, health officials, and other key constituencies will not only make their communities more livable now, but they will also create stronger, more economically viable communities for decades to come. For instance, investments in a community's walkability typically increase land value by 70 to 300 percent and retail sales by 30 percent. Neighborhoods with an above-average Walk Score command a premium of about \$4,000 to \$34,000 in real estate transactions within 15 major metropolitan markets. On the other hand, more than 70 percent of American communities are actually unaffordable for typical regional households after transportation costs, which are families' second largest expense, are factored in with the cost of housing. If America developed in a more compact way between 2000 and 2025, our nation could save \$110 billion in costs for local roads.

*Local Leaders – Healthier Communities Through Design* seeks to highlight the impressive work taking place at the municipal level with key themes and take-aways for other communities that would like to implement similar policies:

- Mayoral leadership is key to ensuring success;
- Citizen involvement and engagement is necessary;
- Policies must be inclusive of people of all ages and economic backgrounds;
- Cities need to prepare now for future demographic trends;
- Sustainability should be viewed holistically to encompass air and water quality, social equity, and health;
- Mixed-use development and multi-modal transit options improve health outcomes;
- Community design for access to healthy foods must be a part of the overall strategy;
- Today's land use decisions have long-term consequences;
- Architects and design professionals play a significant role in shaping innovative projects and policies;
- Government incentives and market forces have great power to impact development patterns; and
- Collaboration across municipal departments is imperative for success.

Communities that implement better design find that one of its greatest benefits is choice. Currently, people throughout most of America have one choice – live in a sprawling, low-density community and drive a car to every destination. While development patterns are starting to self-correct in some parts of the country, most Americans do not have the choice of whether they would like to drive, walk, bike, or take public transit. However, like in the rest of the world, America's suburban sprawl is on the decline. Between 2000 and 2010 Census data shows that primary population growth occurred in the densest quintile of American counties, with losses of approximately two percent in the least dense quintile. Mixed-use, sustainable development and the design of buildings for health are important strategies that can move America's communities toward a healthier future.

In preparation for this future, design and health is a key initiative at the American Institute of Architects. Architecture can make a difference when design professionals serve as creative collaborators in their work with key stakeholders in planning, public health, and other disciplines. Let's imagine a future where designing for health is just the way design is done. Let's imagine a time where all Americans feel they live in places where children can safely walk or bike to school, parents can ride good public transportation to work, people of all abilities can live in well-designed single- and multi-family houses, a quick walk replaces a quick ride to the grocery store, and automobiles become one option among many transit choices. In this future, more grandparents will also be able to age near their family. And perhaps, we will all lose just a little bit of weight, not by drastic changes, but by using design to make healthier choices easier.

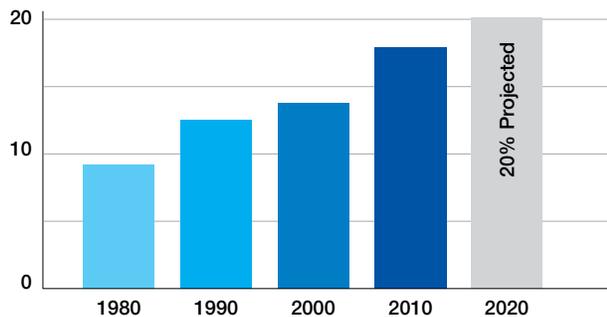
# America's Public Health

## THE HIGH COST OF INACTIVITY

A common tenet of American life holds that the country's citizens can expect the opportunity to lead productive, fulfilling, and happy lives. This idealistic feature of American culture relies in large part on making the health of citizens a vital national priority. Health is a fundamental property of humanity that is expressed across a multitude of social, economic, and environmental indicators, all of which can be influenced directly through urban design and architecture.

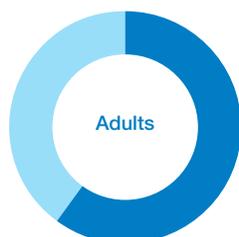
Key barometers of health suggest America is heading in the wrong direction, namely toward physical inactivity, obesity, and chronic diseases. The economic costs of this trend are enormous, the scale of which is clearly illustrated by ever-expanding U.S. health care costs. As health care costs rise precipitously – estimated to reach an astounding 20 percent of GDP by 2020<sup>1</sup> – every sector of the economy faces tough questions about continuing to manage this problem that touches every citizen. With such far-reaching implications, the consideration of health through the tactics of design can only be one place to start, albeit perhaps among the more critical areas to scrutinize. Regardless, addressing the health of our nation demands a collaborative approach, with the design community, public health professionals, government officials, and engaged community members coming together to create actionable policy decisions that reverse the current trajectory and lead toward a better future. Designing a better built environment that integrates progressive strategies for resource use, transit, commerce, and social infrastructure is a comprehensive, cost-effective solution for a healthier future.

### U.S. Annual Healthcare Costs as a Percent of Gross Domestic Product



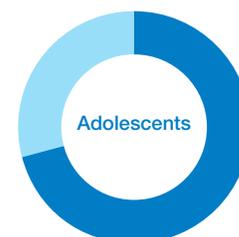
America ranks first worldwide in per capita spending on healthcare.<sup>3</sup> Changes in culture are a big contributor: people have more opportunities than ever to eat unhealthy foods and live more sedentary lives. To a large extent, our medical costs are rising as a result of inadequate levels of physical activity. This is perhaps the single most telling indicator about American citizens: their average number of walking trips decreased by over 30 percent between 1977 and 1995.<sup>4</sup> It is probably not surprising to know that now most Americans do not achieve the daily exercise levels recommended by the Centers for Disease Control and Prevention (CDC).

### Percent of U.S. Adults Not Meeting CDC Recommendations for Physical Activity (2.5 hours daily)



60 percent of adults not meeting activity guidelines

### Percent of U.S. Adolescents Not Meeting CDC Recommendations for Physical Activity (1 hour daily)



71 percent of adolescents not meeting activity guidelines

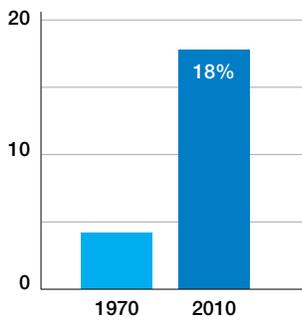
Source for Chart "U.S. Annual Healthcare Costs as Percent of GDP": Centers for Medicare and Medicaid Services, 2009.<sup>2</sup>

Source for Pie Charts: Centers for Disease Control and Prevention, 2012.<sup>5</sup>

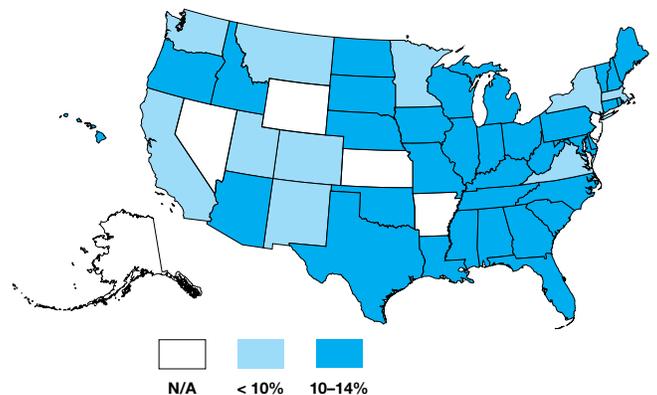
## EPIDEMIC OBESITY

The United States now has the highest rate of obesity in the world, mainly as a result of this inadequate physical activity. The financial costs of obesity were calculated to be \$147 billion in 2008 alone.<sup>6</sup> In the last 20 years, the incidence of adult obesity has risen dramatically to reach more than one-third of the population. Over the past four decades, the rate of childhood obesity has quadrupled. The rate of obesity for adolescents is even higher. If these trends continue, it's estimated that 42 percent of Americans will be obese by 2030. The rates of obesity for children and adolescents are particularly troubling, as they forecast an unhealthier generation of adults to follow.<sup>7</sup>

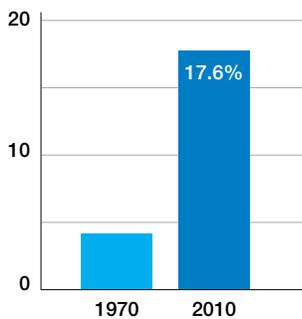
**Percent of U.S. Children Diagnosed with Obesity, Age 6-11**



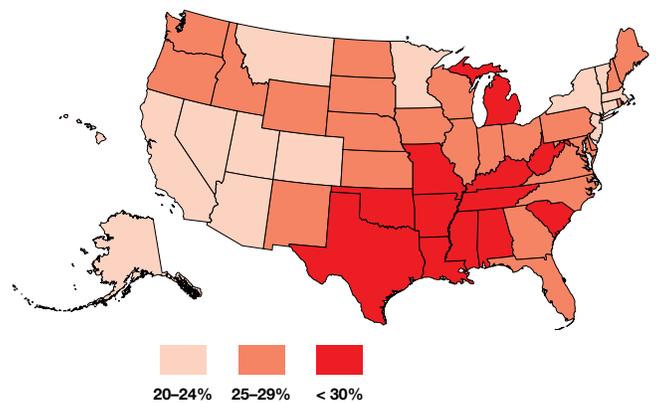
**Percent of U.S. Adults Diagnosed with Obesity, Age 20 and Over, 1990**



**Percent of U.S. Adolescents Diagnosed with Obesity, Age 12-19**



**Percent of U.S. Adults Diagnosed with Obesity, Age 20 and Over, 2010**

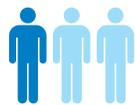


*Current Childhood and Adolescent Obesity*  
Source: Centers for Disease Control and Prevention, 2012.<sup>8</sup>

*Adult Obesity 2030* Figure Source: Robert Wood Johnson Foundation, 2012.<sup>9</sup>

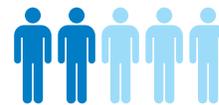
Source for both graphs on adult obesity: Centers for Disease Control and Prevention, "Overweight and Obesity: Causes and Consequences", 2012.

**Proportion of U.S. Children Considered Overweight or Obese Today**



1/3 Children

**Projected Proportion of U.S. Adults Considered Obese, 2030**



2/5 Adults

## Significant Air Pollution

Aside from inactivity and obesity, environmental pollution is another important challenge that can be addressed by creating healthier communities. Poor air quality in particular has been linked to four major health threats: increased mortality, respiratory illnesses, impaired cardiovascular function, and increased risk of cancer.<sup>18</sup> Asthma is the most common chronic disorder diagnosed in children and adolescents, affecting an estimated 7.1 million people across the U.S.<sup>19</sup> It is a continual inflammation of the airways with episodes of obstruction that are frequently caused by poor air quality. Children who are persistently exposed to unhealthy air do not develop full lung capacity.

The U.S. Environmental Protection Agency's AIRNow (EPA) website offers daily forecasts and real-time air quality information for cities across the country. The EPA's Air Quality Index (AQI) monitors five major air pollutants: ground-level ozone, particulate matter, carbon monoxide, sulfur dioxide, and nitrogen dioxide. On days when air quality is more than moderately compromised, children, older adults, people with certain medical conditions, and others who may be especially active outdoors are advised to limit their exposure to outdoor air. On certain days, the air is unhealthy for everyone. Given the possibilities for designing healthier communities, this need not be the case.

Sources for Diabetes Bar Chart: *Diabetes Care, 2001*; *American Diabetes Association, 2011*.<sup>11</sup>

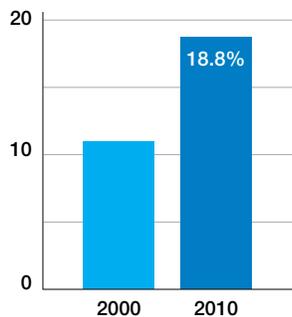
Sources for Heart Disease Bar Chart: *American College of Cardiology, 2011*; *CDC, 2012*.<sup>12</sup>

Source for Cancer Bar Chart: *CDC Cancer Registry, 2009*.<sup>13</sup>

## RISING CHRONIC DISEASES

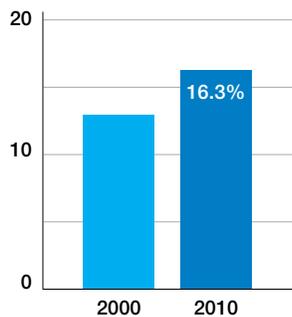
America is not only getting heavier, but our rising rates of obesity are also becoming a serious public health issue. Lack of adequate physical activity and obesity eventually lead to chronic disease. The U.S. Centers for Disease Control and Prevention (CDC) estimates that three quarters of U.S. spending on health care currently goes toward treating chronic diseases. Chronic diseases are now also the leading cause of death and disability in the U.S., with 70 percent of all deaths attributed to chronic disease. This amounts to 1.7 million deaths a year. Furthermore, these diseases place major limitations on the daily lives of almost one out of 10 Americans, or approximately 25 million people.<sup>10</sup> Sadly, many of these cases are preventable.

**Percent of Population Diagnosed with Diabetes in the U.S.**



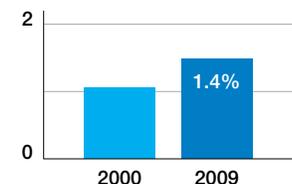
Diabetes is one of the most prevalent and rapidly growing chronic diseases. A leading cause of Type 2 diabetes is obesity and lack of physical activity.<sup>14</sup> People with pre-diabetes who walk or exercise for 30 minutes five times a week over six months can lose five to seven percent of body weight and reduce their risk of diabetes by nearly 60 percent.<sup>15</sup>

**Percent of Population Diagnosed with Coronary Heart Disease in the U.S.**



Any discussion of cardiovascular disease needs to begin with this simple truth: like other chronic diseases, it can be prevented. Eighty percent of heart disease and strokes can be prevented through physical activity and nutrition.<sup>16</sup>

**Percent of Population Diagnosed with Cancer in the U.S.**



Cancer rates can also be reduced through healthier living. Obesity and inactivity have been linked with certain forms of cancer, including breast, esophagus, colon, and pancreatic. By reversing the current trend of obesity, 500,000 cases of cancer could be prevented by 2030.<sup>17</sup>

## Reducing America's Chronic Diseases

"On the basis of sufficient evidence of effectiveness, the Community Guide recommends implementing community-scale and street-scale urban design and land use policies to promote physical activity..."

*Centers for Disease Control and Prevention*

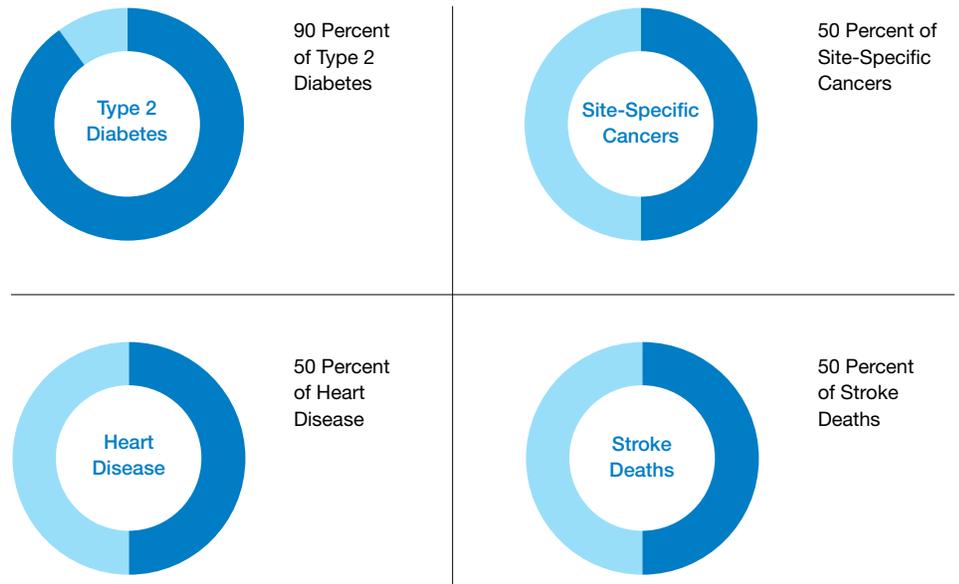
## DESIGNING HEALTHIER COMMUNITIES

When people think of health, often the first thing that comes to mind is the medical industry and treating illness when individuals are unwell. However, architects can help create healthy communities. Preventative strategies for improving health can be designed into our cities in a way that could lead to better health outcomes, helping people from becoming sick in the first place.

Promoting development patterns that are more compact and closer to transit, shopping, restaurants, social services, and community amenities is the first part of a comprehensive, systems-level solution. Active lifestyles rely in large part on expanding the options for when, where, and how people can live, work, and play. These strategies also often result in improved environmental and economic benefits.

The design of urban microclimates – which consider the influence of solar access and reflectivity, wind speeds, air quality, temperatures, acoustics, and urban heat island effects on the pedestrian experience of the city – should also figure greatly in developing healthier communities. Many of these effects on pedestrian comfort are within the architect's and city's control, given building massing, orientation, amenities, and material selections. Walkable neighborhoods are only good if people feel comfortable walking.

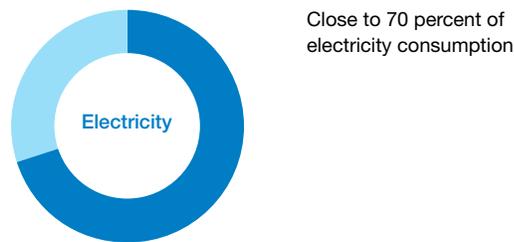
### A Community Designed for Exercise Can Prevent:



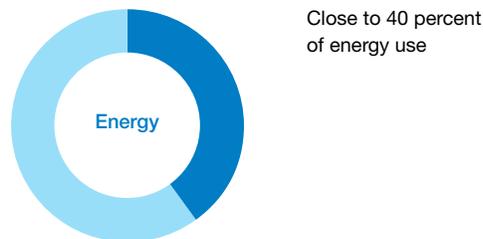
Source for Community Designed Charts: Roberts, Christian K., Barnard, James R. "Effects of Diet and Exercise on Chronic Disease." *Journal of Applied Physiology*. 2005: 98; 3-30.

Buildings can also be designed and retrofitted to promote physical activity, while also reducing the public's exposure to toxic substances indoors and outdoors. The design of green buildings for offices, schools, and housing is a critical component to solving our public health challenges. Green buildings increase daylighting and connections to nature, enable active lifestyle choices, improve air quality and circulation, and use less toxic construction materials. They significantly reduce environmental pollution by using less energy and water. Countless studies have demonstrated the economic gains from reduced absenteeism and improved productivity in offices when people work in a sustainably designed building. For America's companies, reduced absenteeism is often an indicator of improved employee health and satisfaction. In schools, healthier, more sustainable buildings are an investment in America's future, with studies indicating they provide our children with an environment that corresponds to better academic performance. Equity considerations must also play an important role, with a high quality mix of housing choices made available to people of all income levels and ages.

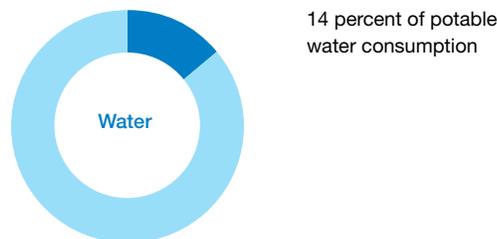
**Percent of Total U.S. Electricity Used By Buildings**



**Percent of Total U.S. Energy Used By Buildings**



**Percent of Total U.S. Potable Water Used By Buildings**



Source for Pie Charts: *The World Business Council on Sustainable Development, the U.S. Green Building Council, and the United Nations Environment Programme, 2012.*<sup>20</sup>

# This Local Leaders Report

## Case Studies Include:

- **New York City, New York**  
*A City-Wide Conversation:  
Promoting Healthier Design*
- **Los Angeles, California**  
*Advancing Mobility and Healthier Growth*
- **Nashville, Tennessee**  
*Promoting Connectivity for  
Physical Activity*
- **Milwaukee, Wisconsin**  
*Revitalizing Menomonee  
Valley Brownfields*
- **Boston, Massachusetts**  
*Designing Healthier,  
High-Performance Housing*
- **Portland, Oregon**  
*Building a City for All Ages*
- **Austin, Texas**  
*Developing Complete Communities*
- **Seattle, Washington**  
*Creating a Health-Promoting EcoDistrict*

The case studies that follow examine a broad range of challenges and opportunities related to design and health. They offer regional diversity and show a wide variety of successful policies currently pursued across the country to improve public health. These cities are focused on using data-driven solutions that could be highly replicable in cities and towns across the country. Resource sharing helps policymakers more quickly shift emphasis toward proven, successful strategies to develop ever more healthy communities. Insights and best practices from the following cities, all of which are included in this report, also represent the wide variety of public policy choices available to local officials in communities of all shapes and sizes.

Public policy decisions make a difference. Local leaders who are committed to working with architects, health officials, and other key constituencies will not only make their communities more livable now, they will also create stronger, more economically viable communities for the future.



## THE ECONOMIC BENEFITS OF HEALTHY DESIGN

The following design considerations, which are explored in greater detail in the case studies of this report, have obvious benefits. A sampling of statistics illustrates the advantages of healthy community design.

### Livable Mixed-Use Communities

Twelve studies compared the behavior of residents in car-centric areas with those in urban communities. The median improvement in some aspect of physical activity for livable urban communities was over 160 percent.<sup>21</sup>

### Walkable Neighborhoods

A man of average height and weight weighed 10 pounds less if he lived in a walkable neighborhood instead of a less walkable community. A woman of average size weighed six pounds less.<sup>22</sup>

### Open Spaces

People who live within one mile of a public park or open space are three times more likely to meet recommended physical activity levels. Just having a park near one's home is more important than the size of the park itself, with the health benefits most apparent among the aging and people in underserved communities.<sup>23</sup>

### Sidewalks

People who live in communities with sidewalks on most streets are 47 percent more likely to get moderate-to-vigorous physical activity at least five days a week for at least 30 minutes each day compared to residents of neighborhoods with sidewalks on few or no streets.<sup>24</sup>

### Active Transportation

Analytical models of transportation in the San Francisco Bay Area found that 15 percent of all miles traveled by active transport would reduce the incidence of dementia and depression by six to seven percent, breast and colon cancer by five percent.<sup>25</sup>

### Complete Streets

An integrated complete streets program can reduce per capita vehicle travel by 10 to 30 percent or more.<sup>26</sup>

### Less Air Pollution from Cars

The American Lung Association in California reports that reducing the state's traffic by 20 percent can avoid thousands of asthma attacks and respiratory symptoms, saving over \$16 billion in health and social costs between now and 2035.<sup>27</sup>

### Health-Promoting Architecture

Six studies evaluated the relationship between people's perception of the environment (or actually safer and more inviting environments) and physical activity. Overall, the median improvement in some aspect of physical activity (e.g., number of walkers or percent of active individuals) was 35 percent given a perceived safer, inviting environment.<sup>28</sup>

### Active Building Design

Men who climb at least 20 floors per week (four floors per work day) can lower their risk of stroke and death from all causes by 20 percent.<sup>29</sup>

### Healthier Indoor Air Quality

Americans spend 90 percent of their lives indoors. The level of pollutants inside buildings may be two to five times higher, and occasionally more than 100 times higher than outside.<sup>30</sup>

According to at least 17 separate studies, improvements to indoor air quality can reduce illness symptoms by up to 90 percent.<sup>31</sup>

### Green Buildings – Better Air Quality

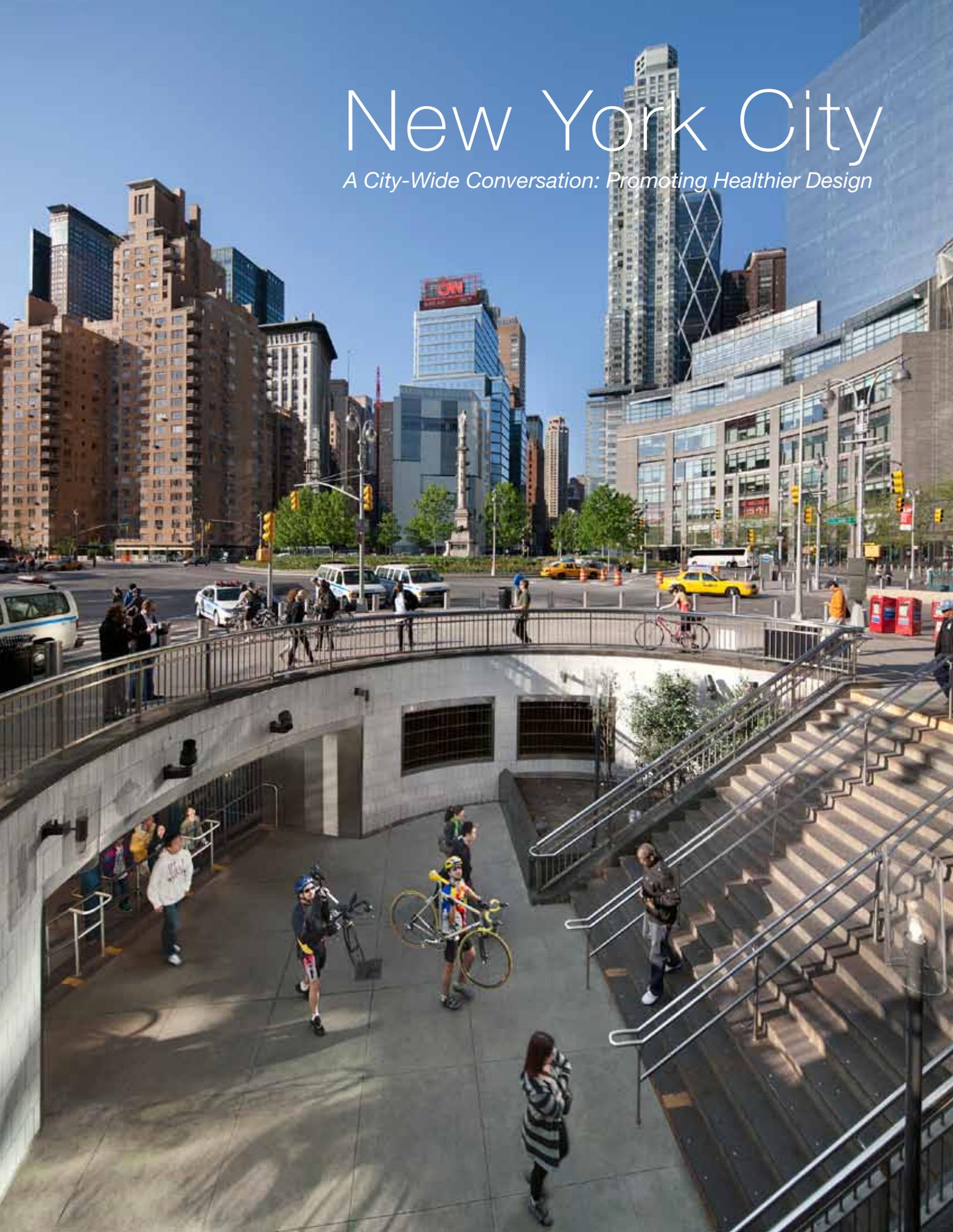
As a rough estimate, a well-designed, energy-efficient school can reduce its impact on outdoor air pollution by:

- 150 pounds of coarse particulate matter (PM10), a principal cause of respiratory illnesses and key contributor to smog;
- 1,200 pounds of nitrogen oxides (NOx), a principal component of smog; and
- 1,300 pounds of sulfur dioxide (SO2), a principal cause of acid rain.<sup>32</sup>

Investments in a community's walkability typically increase land value by **70 to 300 percent** and retail sales by **30 percent**.<sup>33</sup> Neighborhoods with an above-average Walk Score command a premium of about **\$4,000 to \$34,000** in real estate transactions within **15 major metropolitan markets**.<sup>34</sup> More than **70 percent** of American communities are not affordable for typical regional households after factoring in transportation costs, which are a family's **second-largest expense**, with the cost of housing.<sup>35</sup> If America developed in a more compact way between 2000 and 2025, it could save **\$110 billion** in costs for local roads.<sup>36</sup> Communities that are recognized as "Age-Friendly" could be eligible for annual five-year grants in the range of **\$500,000**.<sup>37</sup> By redesigning and updating their systems, new and existing hospitals can reduce energy use by nearly **60 percent**. As a result, a newly-built, code-compliant hospital could save about **\$730,000 annually**.<sup>38</sup> As of fall 2011, one in every five of America's hospitals was **operating in the red**. Especially for small and mid-sized community hospitals, these savings can make a difference between either providing irreplaceable services or closing.<sup>39</sup>

# New York City

*A City-Wide Conversation: Promoting Healthier Design*



## NEW YORK, NEW YORK

### *A City-Wide Conversation: Promoting Healthier Design*

#### NYC AT A GLANCE

**Land Area**

302 square miles

**Population**

8,244,910

**Population Density**

27,102 people per square mile

**Median Household Income**

\$50,285

**Education**

33% bachelor's or higher

New Yorkers typically weigh six pounds less than other adults across the United States.<sup>40</sup> Nevertheless, the city has been experiencing the national trend of rising obesity and chronic diseases. Childhood obesity rates are also higher: about 40 percent of elementary and middle school children in New York City are overweight or obese, compared to approximately 30 percent nationally.<sup>41</sup> New York has been implementing many progressive initiatives to promote healthier foods and eating habits. However, those strategies are not wholly sufficient without simultaneously creating additional opportunities for physical activity.

The American Institute of Architects' local chapter, AIA New York (AIANY), is playing a vital role in this effort by bringing together policymakers and professionals to launch a productive, ongoing conversation about the power of design to promote physical activity. Over the past several years, New York City has made a strong commitment to implement high-impact design solutions as a key strategy for improving public health. New York also made important strides toward reversing the growing obesity epidemic, especially for children. As New York continues to pursue its vision of a fitter, healthier city, its policies are rapidly becoming a nationwide model for other communities, both large and small.

In 2006, AIANY and the NYC Department of Health and Mental Hygiene convened the first NYC Fit-City Conference. After the opening of a Center for Architecture exhibition on obesity and design, a conversation between two leaders at AIANY and the New York City Department of Health and Mental Hygiene sparked a major annual event with stakeholders coming from all over the globe to share research, insights, and best practices. The focus of these conversations was Active Design, generally understood as creating opportunities for physical activity within buildings and the broader urban environment.

The first Fit-City conference was the launching point for active design to become an innovative solution to some of New York City's toughest public health challenges. The conference created a sustained, interdisciplinary, and city-wide dialogue about health. It also enabled government leaders, practicing professionals, and academics across many sectors – health, design, planning, transportation, environmental sustainability, universal accessibility, development and economic development – to work together more closely and collaboratively than ever before.

Since then, AIANY, and the NYC Departments of Health and Mental Hygiene, Design and Construction, City Planning and Transportation, among others, have continually promoted Active Design and played vital roles in initiatives that include:

- Seven Fit-City Conferences;
- The Active Design Guidelines;
- Three Fit-Nation Conferences; and
- The first Fit-World Convening.

*Previous page: Columbus Circle, New York City; architect: Dattner Architects/Parsons Brinckerhoff; photo by Vanni Archive*



## **FIT-CITY CONFERENCES**

In 2006, the first Fit-City Conference brought together architects, municipal agency officials, public health researchers, and other design and built environment professionals to discuss the role that design interventions can play in addressing New York's growing challenges with physical inactivity and obesity. After participants explored ideas and recommendations for design solutions, AIANY collaborated to implement them with the New York City Departments of Design and Construction, Health and Mental Hygiene, Transportation, City Planning, and the Office of Management and Budget, as well as stakeholders in architecture and planning.

Six years later, AIANY and the NYC Department of Health and Mental Hygiene have hosted seven Fit-City Conferences, with participation from multiple city agencies and non-government sectors. These forums offer stakeholders a unique opportunity to witness the city's progress, hear about best practices in active design, share ideas, and advance the citywide conversation on design and health. On a fundamental level, Fit-City attendees are challenged to rethink architecture and reconceive design to profoundly transform how people live. Fit-City sparks transformative relationships that enable professionals from different sectors to devise innovative solutions, such as the Active Design Guidelines.

## **ACTIVE DESIGN GUIDELINES**

The Active Design Guidelines were released in 2010 and offer a wide spectrum of evidence-based research and best-practice strategies for designing buildings, streets, and neighborhoods to promote physical activity. They offer guidance to stakeholders who build the physical environment and promote collaboration among design professionals from different fields. Strategies compiled in the Active Design Guidelines can be easily implemented partially or in their entirety, even as part of pursuing the U.S. Green Building Council's Leadership in Energy and the Environment (LEED) certification. Since their publication, over 15,000 copies of the Active Design Guidelines have been distributed around the world as a free download. New York's leaders are now incorporating the Guidelines into city buildings, street construction projects, contracting processes, and codes.

### **Forming new partnerships**

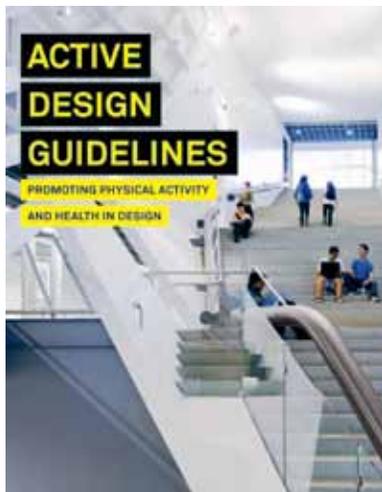
The Active Design Guidelines were created through a partnership among 12 city agencies. Additionally, a series of interactive charettes gave professionals from multiple city departments and private sector firms the opportunity to work together and eliminate communication barriers. Participants have been able to discuss individual priorities and gain a better understanding of each other's roles and what they can learn from one another.

### **Training design professionals**

With funding provided by the Kresge Foundation and the U.S. Centers for Disease Control and Prevention, the NYC Department of Health and Mental Hygiene has hired Active Design staff to train over 3,000 design professionals in NYC and in the U.S. to use Active Design strategies within public and private projects. The training sessions consist of one hour and half-day seminars at AIANY and City agencies, as well as at other professional associations and at individual architecture, developer, and professional design firms.

### **Using the LEED Innovation in Design credit**

Projects undergoing LEED certification can incorporate the credit "Design for Health Through Increased Physical Activity," created through a public/private partnership of New York City Departments of Health and Mental Hygiene, Design and Construction, and private sector collaborators 1100 Architects and Atelier 10. The credit promotes prominent and well-designed staircases, indoor and outdoor exercise facilities, co-located children's active spaces, and open spaces that inspire movement, such as gardens.



*Fit-City 7 Postcard, New York City; image courtesy of AIANY. Active Design Guidelines, New York City; image courtesy of AIANY*

When done on most days of the week, three 10-minute bursts of activity like a brisk walk or climbing stairs spread throughout the day can provide as many health benefits as a single 30-minute aerobic workout.<sup>42</sup>

Via Verde's day-lit interior stairs painted in aesthetically pleasing colors and multiple exterior staircases lead residents and visitors from the ground-level courtyards to the building's rooftop terraces. Outdoor spaces include green roofs with active play spaces and gardening spaces where residents can exercise and relax. Via Verde also has a top-floor day-lit fitness center, as well as bike storage facilities near building entrances.

*Via Verde, New York City; project team: Phipps Rose Dattner Grimshaw; photo by David Sundberg/Esto.*

## IMPLEMENTING HEALTHIER BUILDING DESIGN

The Active Design Guidelines create more opportunities for people to be mobile in all the places where they spend time working, relaxing, and living. These design strategies inspire able-bodied people to forego elevators for the stairs, as well as create more accessible and comfortable spaces for physical activity. Perhaps more than ever, Americans spend much of their lives indoors – both in their homes and working long hours in office environments. Good design makes it easier for people to make healthier choices, feel better, and enjoy staying active throughout their busy day.

### Active Design Strategies

- Designing exteriors that provide multiple active entryways, appropriate transparency levels, and include attractive stoops and canopies to enhance the adjacent sidewalk experience;
- Locating highly visible, comfortable, well-lit, and uniquely attractive staircases in building entryways to make climbing stairs appealing;
- Creating inviting communal areas to encourage active meetings outside of typical work spaces;
- Promoting group physical activity by creating shared open spaces and wider walking routes;
- Incorporating spaces for physical activity, such as exercise rooms and running tracks, and locating dedicated space for adults and children next to each other; and
- Allocating building space for bicycle storage to promote active commuting to work.



New York City is incorporating Active Design strategies into projects across its neighborhoods, including affordable housing developments by private developers. Via Verde, a groundbreaking LEED Gold affordable housing project, and The Melody, a LEED for Homes project, both in the South Bronx, use many of the strategies in the Active Design Guidelines. Both projects used the LEED physical activity innovation credit.

Jointly designed by Dattner Architects and Grimshaw Architects, the Via Verde project came to life as a result of the New Housing New York Legacy Competition. This challenge was launched and organized by AIANY and the New York Department of Housing and Preservation Development. The project transformed a former brownfield site, identifying it as an ideal location to begin a new era of affordable housing using design to promote healthier living.

People who engage in an extra two-and-a-half hours of physical activity per week can become five to seven percent slimmer and reduce their risk of developing type two diabetes by 58 percent regardless of race, ethnicity, or gender.<sup>43</sup>

## PROMOTING HEALTHIER URBAN DESIGN

Better urban design plays a vital role in improving public health all across the United States. Safe and inviting pedestrian infrastructure like sidewalks, intersections, and bike lanes make it easy and convenient for people to stay active on city streets. Complete streets, green spaces, and pedestrian plazas on streets are now a priority for government agencies and architects working to use the Active Design Guidelines to shape a healthier urban environment.

The High Line is indisputably one of New York's most notable initiatives in creating a healthier urban environment. Its two sections opened in 2009 and 2011 as a public park – a landscaped, elevated walkway of nearly 1.5 miles running from Gansevoort Street to West 34th in Manhattan. At the heart of the Special West Chelsea Rezoning District, owned by the City of New York and operated by the Department of Parks and Recreation, the High Line's internationally-renowned design provides open space for exercise and relaxation. Benches in the sitting areas encourage pedestrians of all abilities to take long walks by offering opportunities for them to take breaks, socialize, and enjoy city views. Building the High Line was also economically advantageous since the increased tax revenues from the rapidly developed neighborhood have outweighed the cost of construction.



*The High Line Park was designed by James Corner Field Operations and Diller Scofidio + Renfro, in partnership with the City of New York and the nonprofit group Friends of the High Line.*

In 2009, New York City also reached another milestone when AIANY hosted a forum to present the City's new Street Design Manual, created through another inter-agency partnership directed by the NYC Department of Transportation. The manual incorporates strategies to make city streets friendlier to pedestrians and bicyclists. Since that year, 20 percent more New Yorkers commute to and from work by bicycle; since 2006, over 50 percent more New Yorkers commute by bike.<sup>44</sup>



**In denser cities like New York, creating designated walking and bicycling spaces on streets can encourage physical activity while improving safety for all users.**

## **DESIGNING BETTER ACCESS TO HEALTHY FOODS**

While New York's government and civic leaders work to increase opportunities for physical activity, they are acutely mindful of ways to use good design in order to improve nutrition. By supporting innovative architecture for farmer's markets, the City is creating inspiring spaces for more residents to access healthy foods. Building these markets near public transit points increases the consumption of healthy foods across New York.

Additionally, New York City's Food Retail Expansion to Support Health (FRESH) Initiative – supported by the Departments of Health and Mental Hygiene, City Planning, Economic Development, and the Mayor's and City Council Speaker's offices – has increased supermarket development in NYC's food desert areas using zoning and tax incentives strategies.



*A proposed farmer's market over the Brooklyn-Battery Tunnel designed by Architecture Research Office.*

Public health challenges require broad systemic solutions. New York's local leaders are witnessing the power of Active Design to create lasting and citywide progress. Their success is a testament to the power of an idea whose time has come, as well as the ability of a city-wide, multidisciplinary coalition to create change. Numerous design professionals are now trained to implement the Active Design Guidelines. They are ready to help cities across America address our nation's shared health challenges.

*Dedicated Bike Lanes, New York City; photo by Francisca Sumar. Farmers Market Over Brooklyn Battery Tunnel, New York City; architect: Architecture Research Office.*

“Cities learn from each other. It is important to have a broad public conversation about the connection between wellness and what architects and designers do to create healthier and more livable communities.”

*Rick Bell, FAIA, Executive Director,  
 AIA New York*

“AIA Los Angeles is now working with Bill Roschen, FAIA, President of the L.A. City Planning Commission, Jean Armbruster, who heads the PLACE program at the L.A. County Department of Health, and Margot Ocañas, the first-ever L.A. City Pedestrian Coordinator to organize the ongoing series of conversations ‘Designing Healthier Lifestyles’ and to adapt to Los Angeles the terrific Active Design Guidelines that AIAINY and the City of New York created for New York City.”

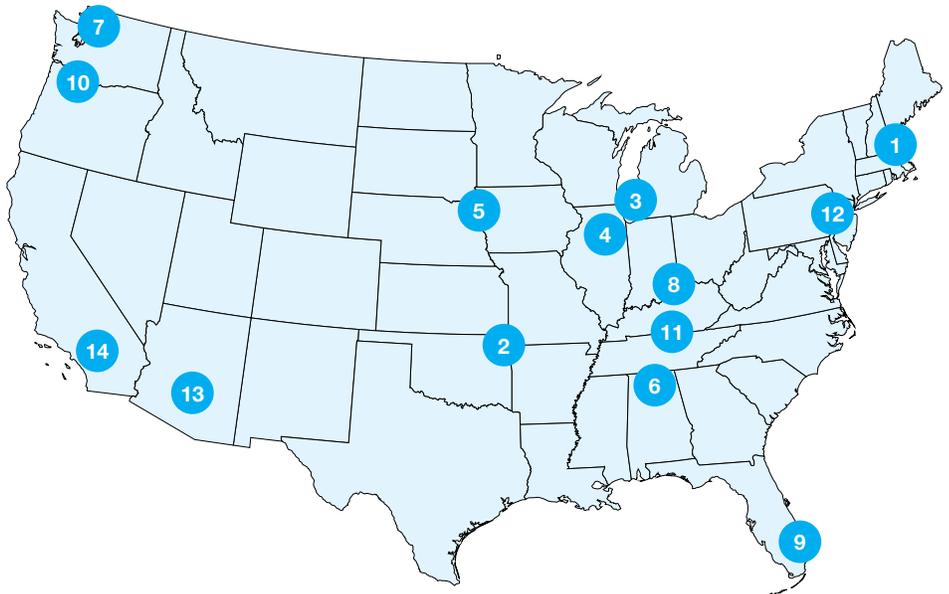
*Will Wright, Hon. AIAILA, Director  
 of Government and Public Affairs, AIA  
 Los Angeles*

## ACROSS THE UNITED STATES

The Centers for Disease Control and Prevention’s (CDC) Communities Putting Prevention to Work Grant enabled New York City to mentor 14 communities of different sizes throughout the U.S. that are looking to improve public health by incorporating the Active Design Guidelines and related policies to improve the built environment to address obesity and chronic diseases. This role has allowed New York to support other communities in tailoring the Active Design Guidelines to their individual needs.

AIAINY and the NYC Department of Health and Mental Hygiene also used the CDC grant to transform their six-year collaboration on Fit-City conferences into a continued national conversation about the importance of Active Design. Launched in 2010, Fit Nation summits in New York, Washington, D.C., and New Orleans brought insights and best practices in Active Design to even more communities across the U.S. Two years later, AIAINY, and the NYC Departments of Health and Mental Hygiene, Design and Construction, and City Planning, launched the first Fit-World Symposium with participants from Brazil, Latin America, Canada, Australia and the U.K.

### Communities Adopting Tailored Active Design Guidelines



- |                       |                         |                     |
|-----------------------|-------------------------|---------------------|
| 1 Boston, MA          | 6 Jefferson County, AL  | 11 Nashville, TN    |
| 2 Cherokee Nation, OK | 7 King County, WA       | 12 Philadelphia, PA |
| 3 Chicago, IL         | 8 Louisville, KY        | 13 Pima County, AZ  |
| 4 Cook County, IL     | 9 Miami-Dade County, FL | 14 San Diego, CA    |
| 5 Douglas County, NE  | 10 Multnomah County, OR |                     |

# Los Angeles

*Advancing Mobility and Healthier Growth*



# LOS ANGELES, CALIFORNIA

## *Advancing Mobility and Healthier Growth*

**LOS ANGELES AT A GLANCE**

**Land Area**  
469 square miles

**Population**  
3,792,621

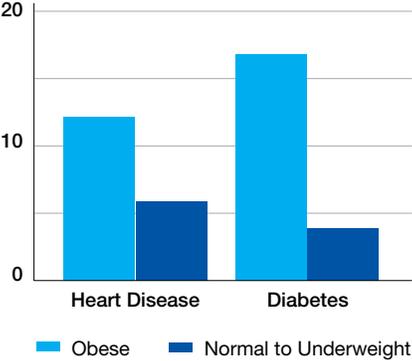
**Population Density**  
8,092 people per square mile

**Median Household Income**  
\$49,138

**Education**  
30% bachelor's or higher

In 2006, one in five adults in Los Angeles County was obese. At the time, physical inactivity and obesity cost the County \$11.9 billion – \$6 billion in medical care and nearly the same amount in lost productivity for working-age adults.<sup>46</sup>

**Prevalence of Chronic Conditions for Adults in Los Angeles County, 2005<sup>45</sup>**



*LA Live, Los Angeles*  
Architect, Nokia Plaza at LA Live:  
Rios Clementi Hale Studios  
Architect, Nokia Theater: ELS Architects  
Architect, Ritz-Carlton Hotel & Residences  
and JW Marriott: Gensler  
Photo by Ryan Gobuty at Gensler

Each community faces distinctive challenges, but government and civic leaders from coast to coast are implementing innovative policies and initiatives to stem the growing epidemic of obesity and chronic diseases. Los Angeles is grappling with the results of its sprawling development from previous decades, but it is making impressive strides that can be replicated by communities of all types and sizes across the U.S. In 2006, local public health officials recognized that obesity was reaching epidemic proportions and collaborated with design professionals to find and implement powerful, cost-effective solutions. The Los Angeles County Department of Public Health, under the leadership of its director Jonathan Fielding, has placed a strong emphasis on designing healthier communities.

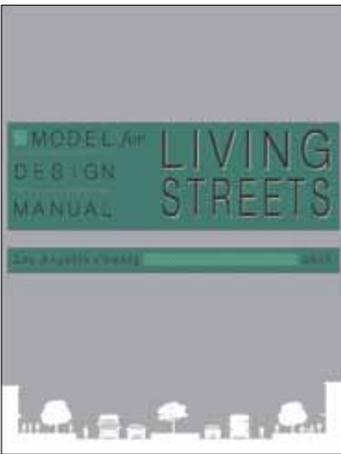
In 2006 the Los Angeles Department of Public Health convened a Physical Environment Work Group that offered 40 recommendations to create a healthier Los Angeles. The Department of Public Health then established a dedicated seven-person unit to promote healthier urban design. Launched in 2006, the PLACE Program (Policies for Livable, Active Communities and Environments) became the area's key engine for change and enabled local leaders to sustain a long-term focus on designing healthier communities. Six years later, Los Angeles has taken several steps to reach its goals:

- Streets for People (2011)
- Citywide Design Guidelines (2011)
- Model Design Manual for Living Streets (2011)
- 35 New Community Plans (2011, continuing)
- The Los Angeles County Healthy Design Ordinance (2012)

Los Angeles's government officials, architects, and civic leaders have made great strides toward creating healthier neighborhoods by focusing on improving urban design.



One out of three people who use public transit are physically active for 30 minutes or more each day, solely by walking to and from transit stops.<sup>47</sup>



“We hope cities of all shapes and sizes use it, adopt it, steal it, and plagiarize it.”

*Ryan Snyder, President,  
Ryan Snyder Associates, LLC*

Download it for free at:  
<http://www.modelstreetdesignmanual.com>

*Bus Shelter, Los Angeles; photo by Sky  
Yim. Model for Living Streets Design  
Manual, Los Angeles, photo by Ryan  
Snyder Associates*

## CREATING ACTIVE COMMUNITIES THROUGH PLACE

Since its creation in 2006, the PLACE program in the Los Angeles Department of Health has been giving grants and technical assistance to create and implement policies and plans for better design, transit-oriented development, complete streets, bike plans, and access to healthier foods. After supporting five Los Angeles County communities and community-based organizations from 2008 to 2011, PLACE helped to launch 10 more initiatives through a two-year grant from the Centers for Disease Control and Prevention’s Project RENEW – Renewing Environments for Nutrition, Exercise, and Wellness (part of the Communities Putting Prevention to Work grant made possible by the American Recovery and Reinvestment Act).

### Supporting Underserved Communities

Some underserved communities in Los Angeles require additional resources to develop proposals for the PLACE program’s grants to implement active living initiatives and adopt health-promoting policies. PLACE thus offers technical assistance to communities with the lowest health outcomes and highest rates of childhood obesity. The program has contracted architects, transportation professionals, and other specialists to collaborate with the most highly underserved communities to develop grant proposals, policies, and plans for building healthier environments.

### Planning for Better Mobility

The Los Angeles City Planning Commission, under the leadership of its president Bill Roschen, FAIA, is working closely with the county Department of Public Health on a range of policy initiatives, especially those related to transit-oriented development. Among the initiatives that PLACE made possible is the creation of nine transit-oriented design plans along the Metro Blue and Green Lines in South and Southeast L.A. These plans will improve neighborhood connectivity to help pedestrians and cyclists reach both the metro stations and each neighborhood’s destinations, like parks, grocery stores, libraries, and schools. Metro stops will include Bike Hubs to improve first and last mile connections and help people move to and from the stations without a car. This initiative is aimed to reduce obesity, diabetes, and other chronic diseases by enabling people to be physically active through better land-use mix, improved urban design standards, inviting streetscapes, and wayfinding signs.

## MODEL DESIGN MANUAL FOR LIVING STREETS

The Los Angeles Department of Public Health helps communities take the next step toward complete streets policies and better street design standards. With support from Project RENEW, a diverse constituency of local design professionals and national experts developed and released the Model Design Manual for Living Streets in October 2011.

The Model Design Manual for Living Streets will help cities comply with new state requirements like the California Complete Streets Act, which mandates that new circulation elements in general plans be based on complete streets principles. This guide is a template for jurisdictions to update their own existing street design manuals, but it also helps to guide street design on the individual building project level. The Los Angeles County Metropolitan Transit Authority will use concepts from the Manual in scoring new projects for funding.

The Los Angeles County Department of Public Health is now working with one of its communities, the City of Lancaster, to adapt the Manual to its needs. Municipalities beyond the County’s borders have downloaded the guide, including those as distant as Miami-Dade County, which formally adopted the use of the Manual in planning initiatives. Many other communities throughout the country are using it as a starting point for developing their own manuals, including: St. Paul, Minnesota; Broward County, Florida; and the Las Vegas region.

**Complete streets have sidewalks, crosswalks, and bike lanes for everyone to travel safely regardless of mode, ability, or age. Living streets go even further by creating environments that invite people to linger and be physically active.**

Will Wright, Hon. AIAILA is the Director of Government and Public Affairs for AIA Los Angeles and one of the city's proponents for creating healthier streets. In addition to helping create the Model Design Manual for Living Streets, Wright and AIAILA have taken a leading role in bringing it to a larger audience, such as hosting the Designing Healthier Lifestyles symposium. "The Los Angeles Department of City Planning is actually calling on us more and more often," says Wright. "They are asking AIAILA to contribute our perspective early on in the planning process."

**Walkable Streets**



**A Better Life in Baldwin Park**

Baldwin Park is a community 20 miles northeast of Los Angeles. Fifteen percent of families live below the poverty line<sup>49</sup>; 34 percent of students are overweight, and 65 percent are unfit.<sup>50</sup> In July 2011, the Los Angeles County Department of Public Health, through Project RENEW, gave the City of Baldwin Park technical assistance to adopt the most comprehensive complete streets policy in the U.S. It then assisted it in adopting a customized version of the Model Design Manual for Living Streets in April 2012. Road "diets", bike lanes, and safe crossings along the major arterials and corridors will create a better street design for healthier families. Adopting the Manual will make it easier to include such changes in every new building project.



*Walkable Streets; design courtesy of Ryan Snyder Associates. Walk Streets, Los Angeles; photo by Dan Burden*



“Over 60 percent of downtown Los Angeles is given to streets and parking lots. Streets for People will help to develop a replicable model for tackling the entire set of policy elements – such as bike paths, public parks, nutrition, and equitable healthcare access. Eventually, the templates for processes such as permitting may be used for 30-40 projects per year by Los Angeles’s 91 neighborhood councils, business councils, and others.”

*Bill Roschen, FAIA  
President, Los Angeles City Planning Commission*

**Living in a community with a 25 percent better land-use mix is associated with a 12 percent reduction in the likelihood of obesity.<sup>48</sup>**

## STREETS FOR PEOPLE

Amidst lagging economic growth and budgetary shortfalls, local leaders need to consider easily implementable and cost-effective design solutions to promote public health. In collaboration with AIAALA, the City of Los Angeles Planning Commission and other stakeholders, PLACE developed the Streets for People (S4P) Complete Streets pilot program in early 2011. The initiative aims to quickly and inexpensively transform small-size unused or under-utilized roads into safe, vibrant, health-promoting spaces. These temporary spaces will improve sidewalks, create mini-parks, and develop bike “corrals” near transit stations.

Stage One: Developing three demonstration plazas to improve inter-agency collaboration, expedite city permitting processes, and develop an application packet for future projects.

Stage Two: Launching the program throughout Los Angeles with neighborhood groups and community-based organizations that would organize the implementation of future projects. Community members will volunteer much of the labor and materials, such as easy-to-remove street paint, movable planters, tables, chairs, and structures to create shade.



Initiated by the president of the L.A. City Planning Commission Bill Roschen, FAIA, Los Angeles’s first one-block pilot pedestrian plaza opened in the Silver Lake neighborhood in March 2012. During the pilot, the street will be closed to traffic for about one year. The local farmer’s market continues to operate at the plaza twice a week.

Parklets like this cost just \$10,000 - \$30,000 and take four months or less to construct. They will be funded by grants, some council discretionary accounts, and support from foundations. Community sponsors like art walk organizations, business improvement districts, and neighborhood councils will cover maintenance costs.

*Sunset Triangle Plaza, Los Angeles;  
architect: Rios Clementi Hale Studios;  
photo by Jim Simmons. Street Bench,  
Los Angeles; photo by Sky Yim*



## HEALTHY DESIGN ORDINANCE

In January 2012, the Los Angeles County Board of Supervisors approved the L.A. County Healthy Design Ordinance. This Ordinance is the first initiative to address a healthier built environment at the county-wide level and is another key stepping stone to an ambitious vision for the region. As Los Angeles looks to develop more transit-oriented communities, the ordinance creates the necessary connective tissue for an active city by:

- Mandating wider sidewalks, better landscaping and shade coverage, as well as short-term and long-term bicycle parking for new developments;
- Requiring more detailed street section designs on building plans in order to promote healthy design features;
- Promoting community gardens in residential and commercial zones;
- Calling for further research and design to make the county friendlier to bicyclists and pedestrians.

One study found that 43 percent of people with safe places to walk within 10 minutes of home met recommended activity levels; among those without safe places to walk, just 27 percent met physicians' recommendations.<sup>51</sup>

## HEALTH ELEMENT IN THE GENERAL PLAN FRAMEWORK

By prioritizing health in its land use planning, Los Angeles government leaders hope to spur a larger city dialogue to create a culture that places a strong emphasis on health throughout the entire city, but especially in disadvantaged neighborhoods. The City of Los Angeles is the first large municipality to incorporate a Health Element as part of its new General Plan Framework to be completed in 2014. This new chapter will guide further transit-oriented development, encourage mixed-use development along key corridors, and support the creation of better design standards and guidelines for new development. In June 2011, the Los Angeles Planning Commission adopted the first-ever Los Angeles Citywide Design Guidelines to encourage higher-quality commercial, industrial, and multi-family residential development. As a result of its work through Project RENEW, the Los Angeles Department of City Planning was recently awarded funds through the County's successful application for a Federal Community Transformation Grant. The Department will launch a comprehensive program to complete and adopt 10 more TOD station area plans within the next two years. The 35 New Community Plans in L.A. will implement all of these principles and promote better access to healthy food outlets, medical facilities, and recreational spaces.

Los Angeles's efforts to design healthier environments have been inspired by – and are highly transferable – to cities, towns, and counties all across the country. Like their peers in Los Angeles, local leaders across America can advocate for a systematic, well-organized focus on improving the built environment. They can create a dedicated unit within their own health department, adopt a design manual for better streets, experiment with temporary public plazas, collaborate across departments, and institutionalize a strong focus on design and health throughout their planning process.

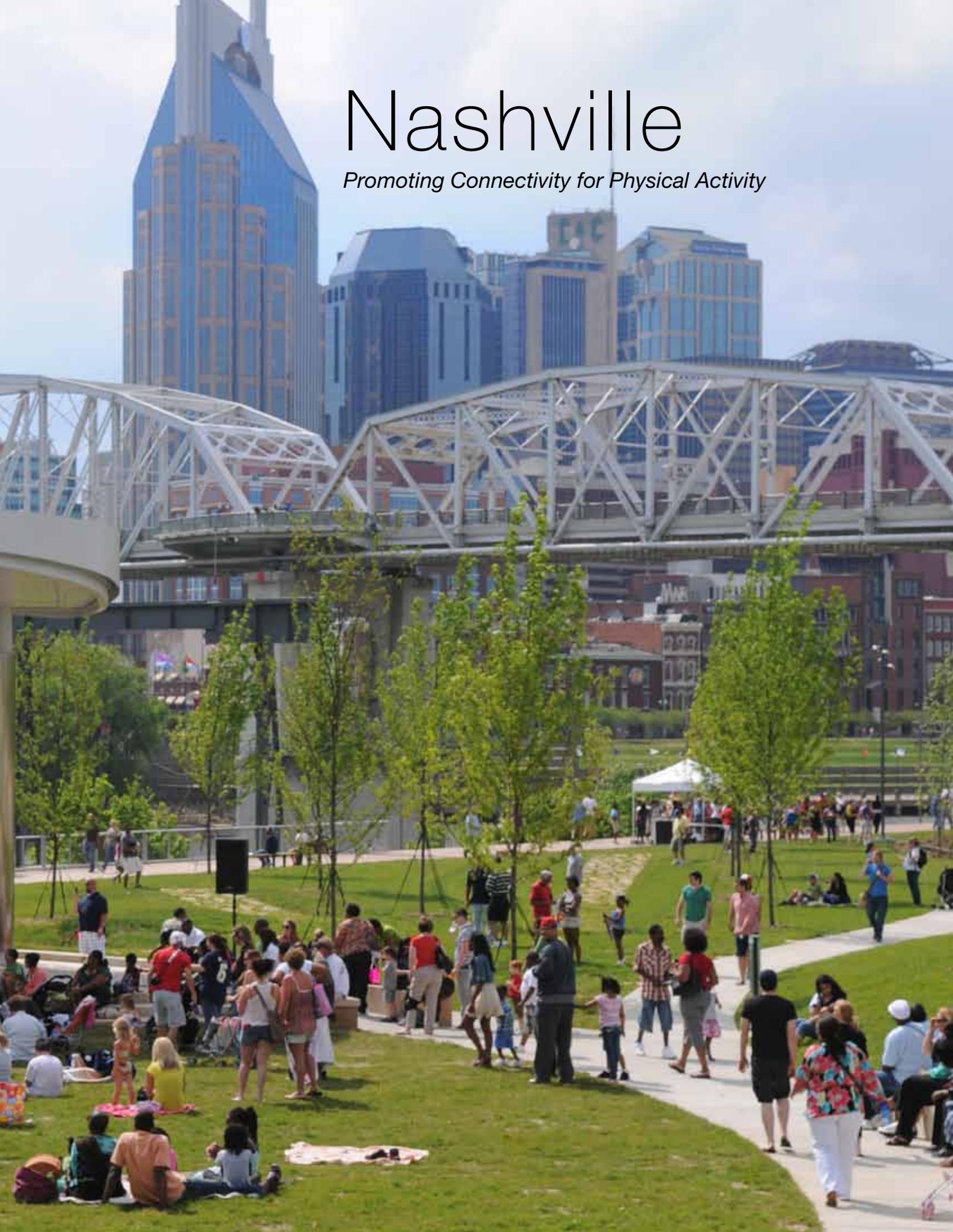
## ACROSS THE UNITED STATES

The movement for complete streets has grown exponentially over the last decade. Cities like New York and San Francisco have long led the way in creating public spaces from underused portions of their streets. According to the 2011 "Comprehensive Planning for Public Health" survey by the American Planning Association, about 20 local governments across the U.S. have now also adopted stand-alone health elements as part of their general plans. Several others have drafted comprehensive plans with stand-alone health elements. Many of these communities are in Texas, Minnesota, and Oregon. Across the board, the communities that pioneered these changes are much smaller than Los Angeles, which suggests this effort can be a highly replicable endeavor for other municipal governments.

*Cherokee Studios, Los Angeles;  
architect: Pugh Scarpa*

# Nashville

*Promoting Connectivity for Physical Activity*



## NASHVILLE, TENNESSEE

### *Promoting Connectivity for Physical Activity*

#### NASHVILLE AT A GLANCE

**Land Area**

4,715 square miles

**Population**

609,644

**Population Density**

1,265 people per square mile

**Median Household Income**

\$45,063

**Education**

33% bachelor's or higher

Over the last two decades, no region in the U.S. experienced a steeper decline in health outcomes than the South.

Nutrition played a central role in the region's increasing rates of obesity and chronic disease. However, these challenges are deeply rooted in community design: inefficient land use, inadequate pedestrian infrastructure, and an overwhelming focus on the automobile as the sole means of transportation. Healthy foods are not always easily accessible for people to make healthy choices. When they are, people frequently do not have the choice to access fresh produce in a way that complements its health benefits, such as by walking or biking. Nevertheless, many communities in the South have begun an intensive search for creative solutions. Over the last few years, Nashville has emerged as an inspired leader with a firm commitment to become a healthier city – perhaps even the healthiest in the South.

Nashville is known as the Music City. Its vibrant culture has attracted many new residents over the past few decades, and it is a major metropolitan area in the Southeast. Faced with projections for continued population growth, Nashville is taking bold steps to create a healthier built environment. The leadership of Mayor Karl Dean, serving since 2007, has been essential to developing a more health-centric culture in Nashville. At the forefront of his efforts is a commitment to improving the built environment, and he has motivated many residents to pursue a more active lifestyle. By championing increased funding for progressive infrastructure policies, Mayor Dean is helping to improve the lives of many Nashville residents.

As an effective leader, Mayor Dean has brought together the stakeholders whose contribution is vital to making Nashville a healthier city. A key partner in the City's efforts is the Nashville Civic Design Center, which has worked with the Mayor and city officials on policy, research, and tangible improvements like complete streets, smarter urban design, and improved neighborhood connectivity.

One of the Center's initiatives is the recent international Designing Action challenge. This competition allowed participants to envision a healthier Nashville through conceptual designs for improving a largely abandoned industrial site along Nashville's Cumberland River in the Downtown area. Another of the Center's key partnership initiatives is with the Metro Public Health Department. Not unlike New York's Fit-City, Nashville's Shaping Healthy Communities program will create an action plan, a narrative book, and conferences focused on improving Nashville's health through the built environment.

*Previous page: Cumberland Park, Nashville;  
photo courtesy of Nashville Metropolitan  
Development and Housing Agency*



**Nashville's investments in active design are paramount to addressing the city's alarming rates of obesity. Today, one out of every four people in Nashville is obese.<sup>52</sup> Mayor Karl Dean is leading by example and regularly initiates community exercise through city programs. He has challenged all residents to walk 100 miles by the end of 2012.**

"Public health in this country would be a lot easier if Karl Dean was the Mayor of every town in the United States."

*Richard Jackson, M.D., MPH, FAAP*

*Bicycling Nashville, Nashville; photo by Metro Nashville Planning Department.  
Neighborhood Activity, Nashville; photo by Metro Nashville Planning Department*

## CREATING AN ACTIVE CULTURE

One of the City's key first initiatives was giving citizens the opportunity to walk, bike, and be active on good streets and sidewalks. In 2010, Mayor Dean signed an executive order that formalized a plan to create complete streets across Nashville. His spending plan then set aside a record \$12.5 million for sidewalks, \$3 million for bikeways, and more than \$10 million for mass transit. Among Nashville's numerous improvements to street connectivity, pedestrian infrastructure, and bike lanes are:

- The 28th/31st Avenue Connector, completed in 2012, is already a model for future projects. It provides healthy pedestrian walkways and bike lanes for residents on the north side of the city to access the center of the city, including three medical complexes, Vanderbilt University and Midtown.
- Deaderick, the state's first "green" street, is a model pedestrian-friendly boulevard with advanced landscaping, extended sidewalks, and upgraded lighting.
- The Music City Bikeway is a 26-mile stretch of greenway trails, bike lanes, and park roads connecting downtown Nashville and the surrounding neighborhoods.

## PLANNING FOR HEALTH PROMOTION

The Nashville Area Metropolitan Planning Organization (MPO) is playing a vital role in improving Nashville's urban design to promote physical activity. As Chair of the MPO's Executive Board, Mayor Dean worked alongside two dozen mayors from across the MPO region to promote the incorporation of two key goals into the MPO's three-goal Regional 2035 Transportation Plan: create a bold new vision for mass transit and support active transportation and walkable communities.

To implement these goals, \$115 million in federal funds will be available to the City in four-year intervals between now and 2035 to develop active transportation through the MPO Transportation



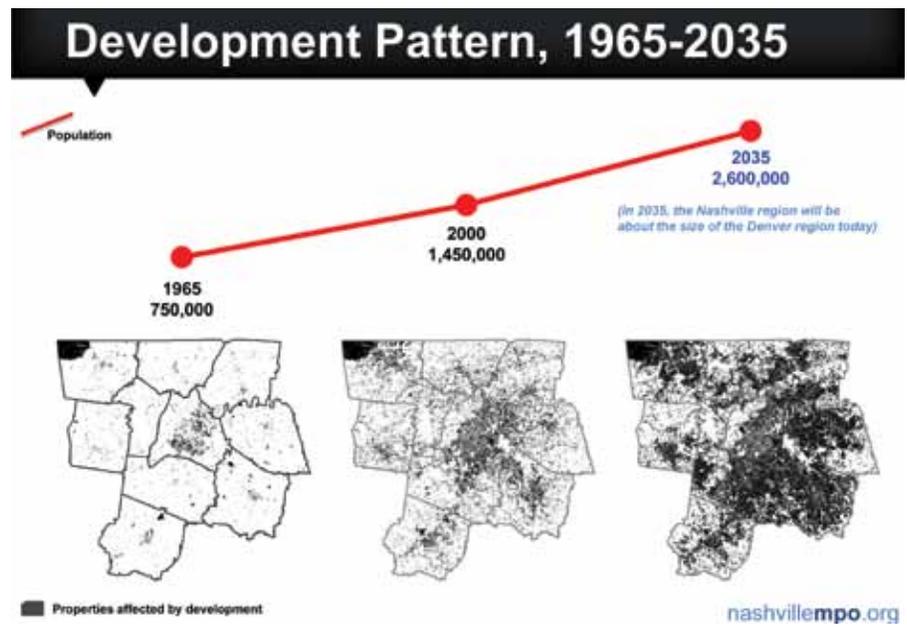
**On average, only 1.5% of federal funding is used for active transportation projects across America.**<sup>53</sup>

Improvement Program. This aggressive investment plan dedicates a record 15 percent of urban roadway funds to active mobility, 10 times more than the national average.

In addition to planning for active transportation, the Nashville Area MPO used the 2010 Census data to analyze the relationship between Nashville's food deserts and the incidence of chronic disease. The Nashville Area MPO prioritizes implementing walkability and pedestrian facilities in areas with higher than average concentrations of low-income, minority and elderly populations – the same populations that are more likely to have chronic diseases such as heart disease and diabetes.

### **A LARGER, MORE THRIVING NASHVILLE**

Nashville's population is projected to grow exponentially in the next two decades. The area's efforts to improve mass transit and connect the downtown with surrounding areas will thus play an important role in the City's future. These improvements will make both the downtown and the surrounding neighborhoods highly livable. As the City builds new attractions in central Nashville, improved connectivity will also fuel the area's economic growth.



- Only 32 percent of Nashville's working-age adults currently have access to a nearby transit station. Of the 100 largest metropolitan areas in the U.S., Nashville ranks 93rd in transit access.<sup>54</sup>
- In 2010, the nonprofit CEOs for Cities ranked Nashville as first in the nation for the amount of time commuters spend in their vehicles.<sup>55</sup>

In the near-term, Nashville is reversing the sprawl of its past by working to develop more mixed-used communities. The Gulch, an innovative mixed-use development in downtown Nashville, is the first building complex in the Southeast to achieve the LEED for Neighborhood Development (LEED-ND) certification from the U.S. Green Building Council. The certification promotes active design by offering credits for features such as bicycle network and storage, walkable and tree-lined streets, and access to recreational facilities. Livable communities like this will enable Nashville residents to avoid excessive commutes and over-reliance on using personal vehicles to meet basic needs.

*Development Pattern, Nashville; image courtesy of Metro Nashville Planning Department*

## NASHVILLE, TENNESSEE

### *Promoting Connectivity for Physical Activity*

Nashville's inspired leadership on active living, reducing sprawl, and promoting transit-oriented development is a model for southern cities and many other communities. Mayoral leadership makes a significant difference in Nashville, as it does in many cities across the U.S. The combination of leadership at the top and strong grassroots participation by citizens who support innovative policies creates a virtuous cycle for a healthier city.

#### **The Gulch: Livability at a Glance** <sup>56</sup>



- 58 percent of businesses and residents are only a quarter of a mile away from biking and walking paths
- 13 diverse amenities such as a post office, gym, church, etc. within a half-mile walk
- 6,124 local jobs within a half-mile walk
- 1,123 daily bus rides within a quarter-mile walk
- Free shuttles with 37 daily stops at five Gulch locations

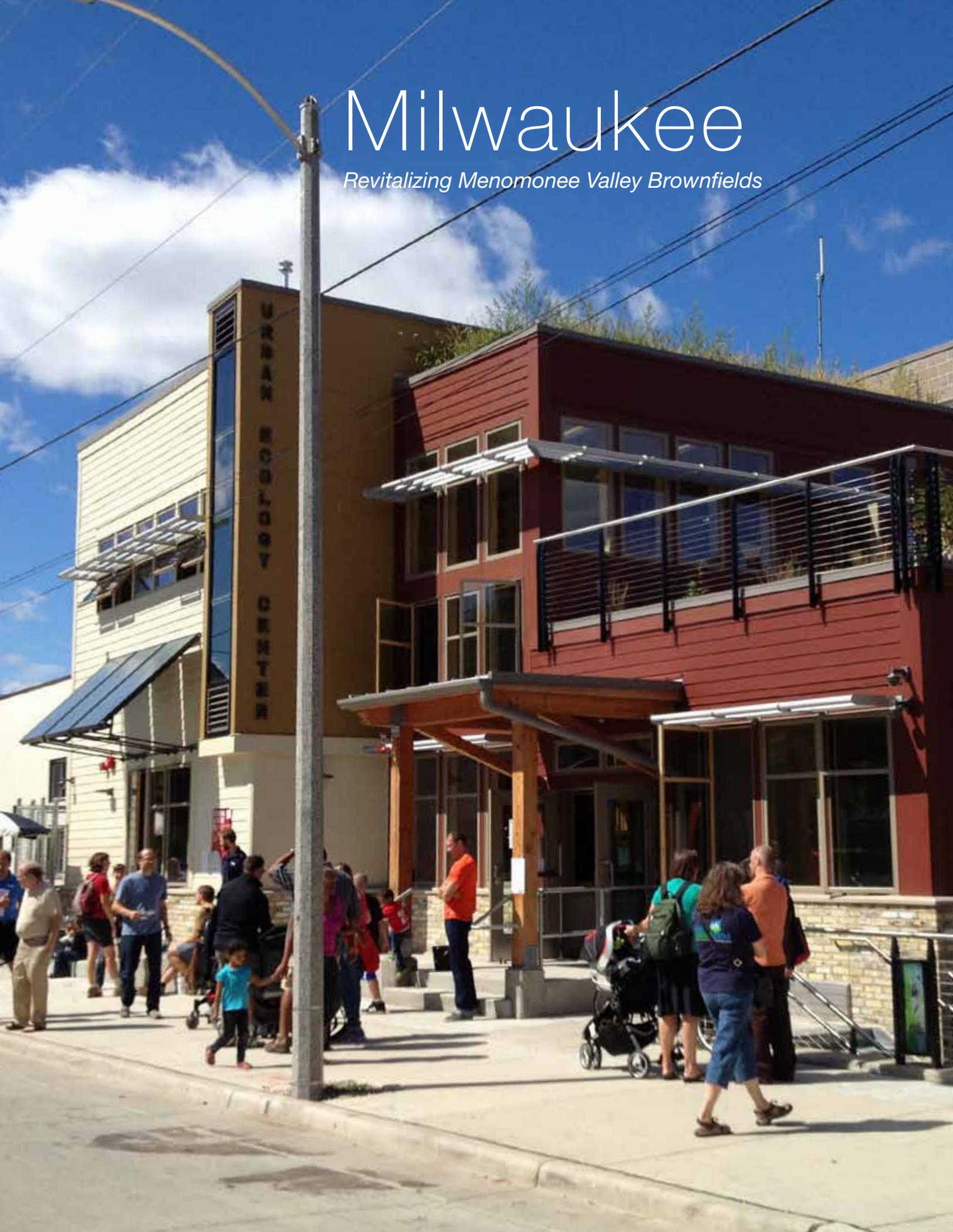
## ACROSS THE UNITED STATES

Many American cities are working to meet their citizens' needs by reversing the unhealthy effects of decades-long sprawling development patterns. As they look toward the future, local leaders can reference innovative mobility initiatives and successful transit-orient development in communities such as:

- **Charlotte, North Carolina:** The City's smart growth strategy concentrated development in key corridors and activity centers, created more mixed-use communities, and advanced active mobility on complete streets with its Urban Street Design Guidelines.
- **Cook County, Illinois:** In partnership with the Alliance for Active Transportation, the County's Public Health Department is leading the implementation of new policies and initiatives to promote active mobility. Among other improvements, the County passed a complete streets ordinance. New developments that do not accommodate multi-modal transportation require approval from the County's Superintendent of Highways.
- **Orlando:** The initiative Get Active Orlando assessed land use, building design, and park areas to establish priorities for healthier redevelopment. The City's Downtown Transportation Plan, Streetscape Guidelines, Design Standards Review Checklist, and other growth management policies incorporate new strategies, such as incorporating wider sidewalks, to increase biking and walking opportunities for residents in the downtown and adjacent neighborhoods.

# Milwaukee

*Revitalizing Menomonee Valley Brownfields*



## MILWAUKEE, WISCONSIN

### *Revitalizing Menomonee Valley Brownfields*

#### MILWAUKEE AT A GLANCE

**Land Area**

96 square miles

**Population**

597,867

**Population Density**

6,188 people per square mile

**Median Household Income**

\$35,921

**Education**

21% bachelor's or higher

Across America, brownfield redevelopment presents a unique opportunity to redesign and re-imagine communities to improve public health and stimulate economic growth. As with any development, innovative design is an important component of successfully revitalizing a brownfield area. By connecting commercial hubs with parks and recreational areas, designers can ensure that residents have better access to enjoyable venues for physical activity. On the edge of Milwaukee, a coalition of stakeholders completely transformed the polluted, blighted Menomonee Valley into a thriving community with new sustainable industries, healthier buildings, and a focus on healthy environments with open spaces for recreation and physical activity. Communities that seek to revitalize their own brownfields can now look to Menomonee Valley as a model for promoting healthy living and fuelling economic growth.

Brownfields are abandoned or under-utilized industrial and commercial areas that degrade local communities. Their past use frequently leaves behind chemicals that can migrate into stormwater runoff and leach into the surrounding soil, local vegetable gardens, and groundwater. Blighted land also increases crime and prevents neighborhood residents from using the surrounding areas for recreation and physical activity. As children like to explore abandoned areas, they sometimes come into contact with toxic industrial waste like solvents, petroleum byproducts, and tars. As legacies of past industrial development, brownfield sites are often in older parts of cities and, therefore, tend to offer prime redevelopment opportunities since they are adjacent to downtown areas or other existing urban infrastructure. Brownfield sites are often classified as such by the Environmental Protection Agency, which can make them eligible for government funding for clean-up and redevelopment efforts.

During the 1980s, the Menomonee Valley collapsed into a forgotten wasteland. Struck hard by economic recession, the former "Machine Shop of the World" became 1,200 acres of burden to the City of Milwaukee. In the following decade, a committed partnership between the City, state officials, businesses, and community leaders redeveloped 300 acres of the Valley into thriving industrial and commercial land.

*Previous page: Urban Ecology Center,  
Menomonee Valley; architect: Uihlein  
Wilson; photo by Michael Kienitz*

Formalized in 1999, the 501 (C) 3 Menomonee Valley Partners, Inc. is the coordinating organization that brings Milwaukee's public and private sector together to redevelop this high priority area. Since then, the collective impact of a \$740-million investment by the public and private sectors in Menomonee Valley includes:

- Dramatically reduced environmental pollution that stemmed from contaminated lands;
- Over one million square feet of healthier green buildings and seven miles of trails; and
- 35 new tenant companies and 4,700 new jobs with family-supporting wages for residents.

Having made these significant strides, the Menomonee Valley Partners' newest priority is to incorporate a stronger focus on healthy living into the Valley's original model of sustainable redevelopment. Launched in 2009, the initiative From the Ground Up continues to redevelop more areas of the Menomonee Valley to boost local economic growth, while collaborating with local organizations to improve community health for its future and current residents.

## **BUILDING HEALTHIER COMMUNITIES**

Redeveloped through a vision for community involvement and focus on sustainability, the Menomonee Valley is experiencing economic growth and people are flocking to the surrounding residential areas. New businesses that look to establish their headquarters or a new branch in a sustainable community have been attracted by the Valley's vision. The Valley's commitment to active design is best evidenced in the creation of the Hank Aaron State Trail – which now runs more than 12 miles and includes trails, pedestrian infrastructure, and open spaces, all of which also attracts business activity. New companies value the desirable physical environment and the opportunities for employees to incorporate physical activity into their workday, which has been shown to increase productivity and lower healthcare costs. Solar and wind power companies, as well as innovative technology and marketing industry companies, have relocated to the area.

### **Sustainable Design Guidelines**

The Menomonee Valley Sustainable Design Guidelines are a collection of demonstrated best practices in better design from across the country. They refer to leading benchmarking tools, such as the U.S. Green Building Council's LEED Rating System, but are tailored specifically to the Menomonee



*Derse Entrance, Menomonee Valley;  
architect: Eppstein Uhen*

*Derse, a manufacturer of high-tech trade show exhibitions, was the first industrial building in Milwaukee to receive LEED Silver certification from the U.S. Green Building Council.*

**People who mostly sit throughout their day have roughly twice the risk of heart disease, stroke, and other cardiovascular disease issues in comparison with those who incorporate physical activity into their day.<sup>57</sup>**

Valley. LEED's site credits have long encouraged brownfield redevelopment given the obvious benefits to a community. In creating a new era of light industry in the Menomonee Valley, the Guidelines support the community's focus on healthier sustainable development. A walk through the area's industrial corridor showcases building design that forges a new vision for a 21st-century industrial area.

Funding the redevelopment of brownfield sites requires time and commitment. However, establishing organizations like the Menomonee Valley Partners can be an important first step for stakeholders looking to create a better life for their community. The State of Wisconsin, Milwaukee government officials and the Menomonee Valley Partners worked collaboratively to secure funding incentives for new businesses relocating to the Valley. These financial incentives for various private-sector business projects have included new market tax credits, the State of Wisconsin brownfield grants, renewal community tax credits and deductions, the Wisconsin Energy Efficiency and Renewable Resource program, and the Milwaukee Economic Development Corporation's low-interest loans.



*The Hank Aaron State Trail weaves through Menomonee Valley, providing community members with opportunities to be physically active during and outside of work hours.*

## **TOWARD A HEALTHIER FUTURE**

Building on its previous successes, the Menomonee Valley Partners launched *From the Ground Up*, a \$26 million project that is expanding the community vision for the Valley to link sustainable growth with healthy living. Supported by public and private investment, Menomonee Valley Partners is redeveloping vacant land into open space for recreational activities that improve community health.

Prior to the Valley's redevelopment the presence of vacant lands brought negative activity to the area. The rate of obesity also climbed since parents could neither enjoy the outdoors themselves, nor encourage their children to play outside. Today, 41% of nearby residents are overweight or obese. With more than a quarter of residents under the age of 18, designing healthy green spaces is not just a proven way to attract new companies, but it is essential to the community's future.

*From the Ground Up* also partnered with the nonprofit group, The Urban Ecology Center, which recently opened its third branch in the Menomonee Valley to promote environmental awareness and improve community health. The Center encourages residents to participate in health-promoting outdoor activities and has launched a two-year study to establish health baselines for the Valley. The outcomes will be used to monitor the Valley's progress as it redevelops more land and builds a healthier community.

With few exceptions, living near trails or having trails in one's neighborhood has been associated with people being 50 percent more likely to meet physical activity guidelines and 73 to 80 percent more likely to bicycle.<sup>58</sup>



*Uihlein Wilson Architects designed this Urban Ecology Center branch in the Silver City neighborhood to echo its mission of revitalizing the Valley. The 6,500-square-foot building is a renovation/addition to an abandoned 1930s tavern. The design includes salvaged materials and a passive-solar air intake system.*

The responsibility for revitalizing brownfields at the local level often lies with the planning, zoning, or economic development office. However, local public health departments can also play a strong role in redeveloping these areas to improve community health. The process of financing, planning, and redesigning brownfields requires strong commitment from both public and private sector leaders, as well as a transformational vision. Individual communities have distinct needs, but the Menomonee Valley Partnership is a successful model for many American communities.

## ACROSS THE UNITED STATES

### **Columbus, Ohio: Small Brownfield Sites and Healthier Design**

Communities that need to revitalize smaller brownfield sites can refer to the Columbus Fund Program, which the City developed and implemented in late 2010 after extensive consultations with local business and civic leaders, including the Columbus Area AIA Chapter. The \$1 million fund is intended to revitalize smaller blighted areas in inner-city neighborhoods. It awards brownfield redevelopers up to \$200,000 for environmental assessment and land acquisition. Recipients are strongly encouraged to take advantage of the City's green building incentives.

The Green Columbus Fund reimburses 100 percent of a project's LEED certification fees. The minimum requirement for receiving City reimbursement from this program is the achievement of LEED certification. Projects must also achieve at least eight of the 12 credits that are particularly important to the City. These credits promote physical activity by encouraging density, community connectivity, and public transportation. They also reduce heat island effect and promote healthier environments by reducing water and energy use. Developers can receive up to three times the amount of the certification fee by building in the city's specially-designated zone, as well as improving or expanding an existing building; achieving the LEED certification for existing buildings; and meeting more than eight credits or achieving a higher level of LEED certification.

In 2011, the City Council authorized the program's first four grants with a combined value of nearly \$250,000. Two of these grants made possible the Wesley Glen Wellness Center near a retirement community and the Capital Park Family Health Center, which offers healthcare to low-income patients and was consequently able to expand its existing services.

*Back of Urban Ecology Center,  
Menomonee Valley; architect: Uihlein  
Wilson; photo by Michael Kienitz*

# Boston

*Designing Healthier, High-Performance Housing*



## BOSTON, MASSACHUSETTS

### *Designing Healthier, High-Performance Housing*

#### BOSTON AT A GLANCE

**Land Area**

48 square miles

**Population**

625,087

**Population Density**

12,793 people per square mile

**Median Household Income**

\$50,684

**Education**

42% bachelor's or higher

Boston is a national leader in green building and passed one of the first mandatory green building policies in the country. The City's sustainability efforts have continually expanded over the past decade. Boston is now moving to address a broad range of issues through a set of initiatives that will both reduce residents' energy costs and improve community health.

These initiatives are vitally important as Boston is dealing with many of the same health issues that are affecting other communities across America: rising levels of obesity, chronic diseases, and asthma. The rates of asthma, in particular, remain stubbornly high – these and other negative health outcomes are magnified in Boston's underserved communities. The City's proactive approach in supporting green affordable housing is making a positive difference and provides a successful template for public health solutions that serve disadvantaged residents.

Boston's municipal leaders are focused on meeting the challenges of creating a more socially equitable and healthier city. In 2004, Boston's long-serving Mayor Tom Menino created the Green Building Task Force. This committee developed design solutions for a deteriorating public housing stock and created a plan to guide private projects toward better design and energy efficiency. Architects had a seat at the table and collaborated with city officials on specific design elements that could help local families achieve greater energy efficiency while living in healthier indoor environments. Building off of the committee's recommendations, the Mayor created the Green Affordable Housing Program in 2007. This program created sustainability initiatives focused on benefiting communities that were in the greatest need of improved housing conditions. The improvement of public housing since 2007 has created enthusiasm in the community, as well as the building and health sectors. The city also offers a clear example of cutting-edge design extending beyond private development and into underserved communities.

The city's next steps aim to provide more community equity by using design and construction to alleviate the financial and health burdens on Boston's families. Communities that lack recreational areas and safe streets force residents to spend more time indoors. In underserved communities, residents live amid pests, mold, and poor ventilation. A combination of a decline in physical activity, poor indoor air quality, and low outdoor air quality resulting from proximity to highways converge to cause major health problems. High energy costs and medical bills can be extremely hard on low-income families that cannot afford sudden, substantial utility and healthcare expenses. Boston has found that using design to promote lower energy costs and cleaner air can offer a significantly better life for these communities. This success has sparked new initiatives that include:

- E+ Green Buildings Program (E+ GB), which demonstrates the feasibility for Energy, Environmentally and Equity Positive homes (2011); and
- E+ Green Communities (E+ GC), which builds on the E+ GB program, expanding the sustainability focus to the neighborhood scale (2012).

*Previous page: MAHA Office, Boston;  
architect: Studio G Architects; photo-  
graph by Charles Mayer*



## GREEN AFFORDABLE HOUSING

In 2007, Boston's Mayor Menino passed the City's green building policy, which included a focus on green affordable housing to ensure that low-income populations would benefit from lower energy costs and better indoor air quality. Many factors in low-income communities have exacerbated the problem. In Boston's Roxbury neighborhood of Highland Park, the health impacts of sick buildings have been especially evident, and asthma rates are higher than in nearby communities. Fifteen percent of adult residents have asthma, four percent higher than the Boston average.<sup>59</sup> The rates of asthma for children and adolescents are a serious concern and hospitalizations have continued to place a financial burden on families that struggle to pay medical bills and have to forgo income in order to stay home and care for sick children. Roxbury has a significant population of residents living below and close to the poverty line, which has led the City to prioritize green building projects in the area. As a result of this program many more residents now have a healthy, more affordable home that allows them to concentrate on other important priorities in their lives.



Spencer Green is a 48-unit affordable rental housing project in Chelsea, Boston, that reflects the City's efforts to revitalize underserved communities with healthier green design. Designed by Utile, the project is creating a healthier community with better indoor environments, active spaces, and neighborhood connections to increase physical activity and social interaction in the community. The complex opened in 2009, financed partially with Low Income Housing Tax Credits available from the State's Department of Housing and Community Development. Boston has made it easier to finance projects that help low-income community residents afford to live in healthy and sustainable housing.

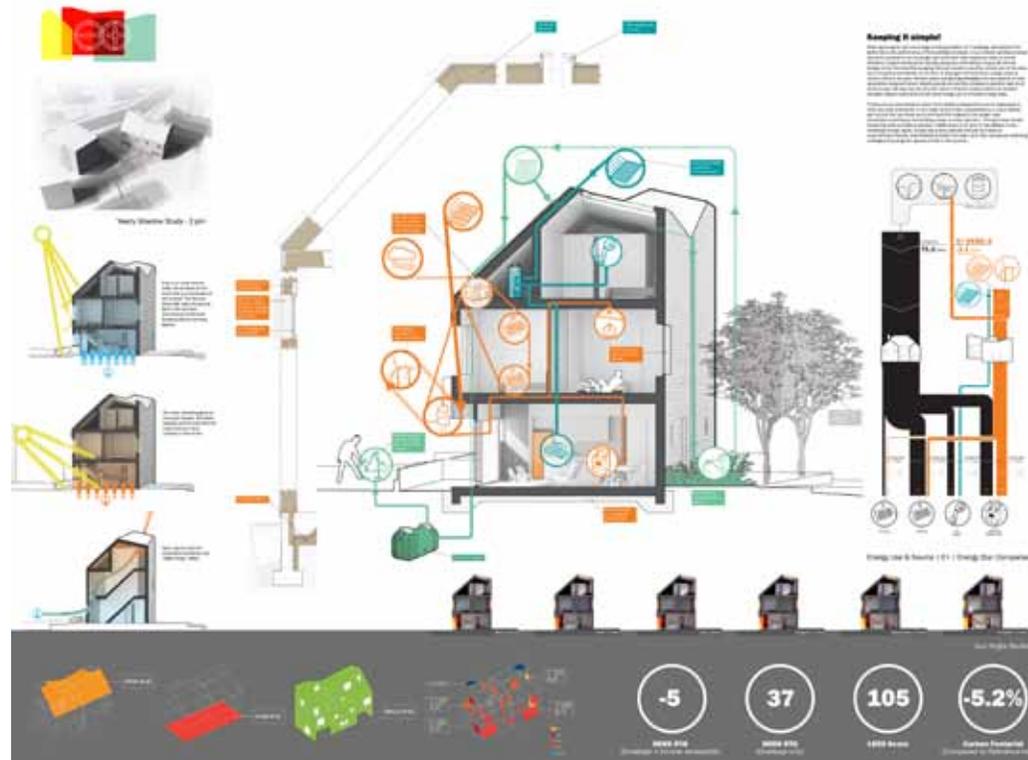
- Design and construction follows healthy homes standards, including no carpets and the use of paints and adhesives that are low in volatile organic compounds.
- Green design includes an insulated white roof that keeps each building cool in the summer and warm in the winter.
- All building systems, such as the building envelope, were designed to meet EnergyStar Homes, LEED for Homes, and HUD Healthy Homes standards.

*Spencer Green Side View of Building, Boston;*  
*architect: Utile; photo by Robert Knight*

Buildings with poor ventilation result in more respiratory irritation and illnesses. Innovative design can significantly lower health risks.

Indoor pollutants can trigger wheezing and asthma attacks, which can require frequent and expensive hospitalizations.

One in five asthma cases are linked to moisture or mold. Good building design limits exposure through better insulation.<sup>60</sup>



### E+ GREEN BUILDING PROGRAM

The Mayor's E+ Green Building Program, launched in 2011, takes Boston's efforts another step forward by seeking to positively transform entire communities. Architects have been challenged by the City to create healthier, ultra-efficient housing prototypes. Cost savings were an important part of the design criteria, since Boston's leaders wanted model designs that could be used throughout the city. Winning design teams produced prototypes that surpassed the City's expectations, with new buildings designed to create more energy than they consume. With efficient operation, residents can effectively sell back this extra capacity to the utility to achieve "energy positive" status. Boston is now breaking ground on these homes in Highland Park and Jamaica Plain, where savings on utility bills and the potential additional income from being energy positive will give low-income residents opportunities to spend more money on healthcare and other needs.

Boston's public health leaders have been actively involved in the creation of the E+ Green Building Program to ensure that it improves health outcomes. The Boston Public Health Commission is a key stakeholder in the city's conversations about the built environment, and its participation in community forums is heartening to residents who hope for better living conditions. In reviewing the RFPs for the E+ Green Building Program, the Public Health Commission focused on how each design would benefit communities where many residents suffer from asthma. In partnership with the Boston Asthma Coalition, the Boston Public Health Commission is ensuring that the program's implementation promotes better air quality.

*E+ Green Building Design Board,  
Boston; architect: Utile*



**Gardens are of vital importance to underserved communities. In low-income neighborhoods, they are four times as likely to create civic momentum for addressing other issues as gardens in non-low-income communities.**<sup>61</sup>

## E+ COMMUNITY INITIATIVE

In 2012 Boston expanded the E+ Green Building Program with two proposed development sites in Mission Hill and Highland Park neighborhoods. In bringing the program to scale, municipal leaders are able to address broader health issues. The Boston Redevelopment Authority recently organized community meetings in Mission Hill and Highland Park to hear residents' ideas for improving their communities in ways that go beyond energy efficiency and cutting-edge affordable housing design. Community members related the importance of having more safe green spaces and better neighborhood connectivity for youth and families to engage in physical activities and grow together as a community.

The Boston Redevelopment Authority is planning this expansion to meet the residents' stated vision for their community. Green buildings will be connected with open spaces and will offer venues for community events. Community gardens will offer residents healthier foods and opportunities to connect with their neighbors.

Boston is a clear leader in green building policy. It has a long history of creating successful solutions for city residents. The American Institute of Architects' Local Leaders report series has examined the city multiple times since 2007. The City's programs seek to address the needs of all Boston residents. At the same time, the E+ Green Buildings and Communities programs place a strong focus on promoting equity with green affordable housing that benefits residents who are most in need. These types of progressive policies build stronger, healthier, and more sustainable cities.

## ACROSS THE UNITED STATES

Over the past several years, other communities across the country have also implemented progressive public policies to create healthier, more efficient affordable housing. Municipal leaders who wish to reference similar policies can review the efforts of these communities, among others:

- **Denver:** Beginning in 2010, all affordable housing projects that receive City subsidies must meet the Enterprise Green Communities criteria, which cover indoor air quality as well as energy and water efficiency. For the year 2011, the City's goals included adding 100 new units of affordable green housing. The City is also increasing the funding from grant and loan programs for green affordable housing.
- **Cleveland:** All new and rehabilitated affordable housing projects that receive financial assistance from the City must adhere to the Cleveland Green Building Standard. Developments can meet the requirement with certification through Enterprise Green Communities or the U.S. Green Building Council's Leadership in Energy and Environment (LEED) – Silver Certification or higher.

Local governments currently need to offer special support to underserved residents whose health outcomes will improve the most as a result of healthier housing. In the future, healthier housing should become the standard for every resident in America's cities and towns.

# Portland

*Building a City for All Ages*



## PORTLAND, OREGON

### *Building a City for All Ages*

#### PORTLAND AT A GLANCE

**Land Area**

4,058 square miles

**Population**

583,776

**Population Density**

2,420 people per square mile

**Median Household Income**

\$48,831

**Education**

41% bachelor's or higher

Nearly one in five Americans will be 65 or older by 2030. Portland's leaders are well aware of this trend and they have been planning effectively for this rapidly approaching future. In 2006 and 2007, the City of Portland was the only U.S. community in a group of 33 cities that participated in the World Health Organization's Global Age-Friendly Cities project, which was an effort to identify key elements of the urban environment that support healthy aging. In 2010, the World Health Organization (WHO) launched its Global Network of Age-Friendly Cities to assist communities with planning for their aging populations. Portland became one of the Network's first two U.S. members in 2011, along with New York City. The City's municipal leaders are now working in close collaboration with the Portland State University's Institute on Aging, design professionals, and other stakeholders to build healthier, thriving neighborhoods for citizens of all ages.

In 2011, one out of 10 Portlanders was age 65 or older.<sup>62</sup> The city's population is quickly aging, and its leaders have been acutely mindful of the fact that innovative design allows older family members to live more active and fulfilled lives. With a documented rise in local rates of obesity and chronic diseases, Portland has also come to recognize that good design simultaneously creates healthier neighborhoods for everyone – children, adolescents, and younger adults. The City conducted multiple analyses to evaluate whether its neighborhoods were welcoming to citizens who wish to lead healthy lives. This has included whether people can buy fresh produce in full-service grocery stores and play in parks, as well as if they have adequate transit stops, commercial services, and sidewalks. Portland's downtown already has complete communities, but neighborhoods away from the city center are less livable. With the right support, these neighborhoods can become more conducive to healthier lifestyles. As the City looks to accommodate over 130,000 additional households by 2035, its new policies will help to meet everyone's needs while avoiding the cost of maintaining a sprawling, inefficient infrastructure. Portland's new comprehensive planning strategy supports:

- Age-friendly accessory dwelling units (ADUs);
- More easily accessible transit and housing across the city; and
- Walkable, complete, and vibrant 20-minute neighborhoods.

*Previous page: Edith Green-Wendell Wyatt  
Federal Building, Portland; architect: SERA  
Architects and Cutler Anderson Architects;  
photo by Jeremy Bittermann*

The nationally representative Health and Retirement Study of 1,604 participants found that loneliness was a predictor of functional decline among participants who were older than 60.<sup>65</sup>

## ENCOURAGING ACCESSORY DWELLING UNITS



While evaluating the options for supporting its growing and aging population, the City of Portland implemented an important initiative to promote healthier living options for older adults. In April 2010, Portland eliminated all development fees for homeowners who build a new structure next to their house or convert their garage, attic, or basement into a second living unit. At the same time, the City increased the allowable size limit for Accessory Dwelling Units (ADUs), which can now be three-quarters of the primary structure or 800 sq. ft., whichever is less. The fee waiver typically saves homeowners about \$7,000 to \$15,000 per project and will be available until at least June 2013. To be classified as an ADU, the new unit must include a bedroom, a kitchen, and a bathroom. Since the fee waiver and new size limit took effect, homeowners and builders have taken out over 250 permits to build ADUs, roughly equivalent to one-sixth of all single-family building permits issued during the same period.<sup>64</sup>

Living in an ADU allows aging adults to stay close to loved ones, where caregivers can more conveniently offer them physical and emotional support. As a close member of a larger family, older adults are more likely to engage in community activities and remain physically active, which can help to prevent debilitating injuries, depression, hypertension, and other medical problems. It is also important to remember that much of this generation's savings have been diminished by the recent economic downturn. The option to live in a comfortable, yet more resource-efficient home next to family members can mean more self-sufficiency and ability to afford adequate medical care. Architects can easily design ADUs with many features to support aging adults, such as a zero-step entrance, doors with 32 inches of clear passage space, a walk-in bathroom on the main floor that allows wheelchair access, and floor materials that minimize slipping.

*Wine Lovers' ADU, Portland; architect: Departure Design; built by Hammer & Hand; photo by Bright Designlab*



**MULTNOMAH COUNTY  
HEALTH 2012** <sup>63</sup>

- 1/4 of adults obese
- 1/3 of adults overweight
- 1/4 of 8th-graders and 11th-graders are overweight or at risk of becoming overweight

**PORTLAND AREA  
LIVABILITY 2012**

**45 percent of Portlanders live in complete, health-supporting neighborhoods with access to transit, a full range of goods and services, schools, parks, and healthy food within a 20-minute walking distance**

*Twin Studios Kitchen, Portland; architect: Departure Design; built by Hammer and Hand; photo by Bright Designlab.*

**CREATING A COMPREHENSIVE, DATA-DRIVEN STRATEGY FOR AGE-FRIENDLY LIVING**

Beyond encouraging Accessory Dwelling Units, Portland is establishing a comprehensive strategy to meet the needs of its aging population. Adopted in April 2012, the 25-year Portland Plan enumerates 10 actions within its five-year goals that will make the city more age-friendly. All of the Portland Plan's short-term goals are linked to improving housing options and ensuring that communities are accessible through multiple modes of transportation. To guide and demonstrate the City's subsequent progress toward better health, Portland will continue working in partnership with Portland State University and the nonprofit Greater Portland Pulse to track and raise awareness of community health trends.



*Twin Studios Kitchen, Portland; Architect: Departure Design; Built by Hammer and Hang*

One of the five-year goals is changing the City's policies and programs to increase the supply of housing that is accessible to disabled persons. Among the future policies currently under consideration are:

- Development fee waivers for home additions with accessibility features;
- Additional exemptions for accessible housing under the City's Limited Tax Exemption Program;
- Accessibility and affordability requirements added to the City's transit-oriented development property tax abatement; and
- Incentives for retail and commercial developers to exceed requirements of the Americans with Disabilities Act and use universal design principles.

The goal of accessibility permeates the Portland Plan. In order to support users of all ages and abilities, the City and its stakeholders are now discussing the possibility of redefining "transit-oriented development" as projects located one-quarter of a mile, as opposed to one-half a mile, from a transit stop. From a broad perspective, by 2030, the City hopes to make every community a 20-minute neighborhood in terms of walkability and access to basic services. The availability of multiple means of transportation and appropriate pedestrian infrastructure is central to this objective. Initiatives outlined in the Portland Plan address the development and maintenance of pedestrian infrastructure like sidewalks and streetlights, as well as the creation of more green spaces.

60 percent of America's houses built in 2000 will have a resident with severe long-term mobility impairment at some point during the lifetime of the building itself.<sup>66</sup>



The Portland State University's Institute on Aging is now working with the Portland Bureau of Planning and Sustainability to create a detailed plan for building age-friendly communities. Among other improvements, it could give developers more incentives to build accessible housing. However, the City has already implemented the new Multifamily Housing Limited Tax Exemption, which strongly echoes the City's goal to create communities for all generations. Effective since August 2012, the incentive advances this goal by requiring projects to compete against each other after meeting a set of rigorous minimum criteria. Beyond mandating adherence to the proposed new definition of transit-oriented development, the scoring criteria stipulate certain affordability and density requirements, as well as a green building certification. To meet the minimum qualifications for the incentive, the development must also provide pedestrian access to light rail or mass transit. Any commercial part of the project must meet a community need for amenities that are not available elsewhere within walking distance. Among the bonus scoring criteria is access to amenities within one-quarter of a mile. Projects are also more likely to receive the tax exemption if they offer public space, such as community gardens or pedestrian and bicycle connections to trails and adjoining neighborhood areas.

Local leaders across the country are taking important steps to ready their communities for the rapid demographic shifts that are taking place. In many ways, Portland is leading this effort and has made great strides to prepare the city for its aging population. Its forward-looking policies, established community partnerships, and long-range planning will help to create an accessible community that is a great place to live for people of all ages.

*Portland Mall Revitalization, Portland;*  
*architect: ZGF Architects, LLP; photo by*  
*Bruce Forester Photography, Inc.*

## ACROSS THE UNITED STATES

Older adults increasingly hope to stay close to home. Across the U.S., only five percent of adults age 55 and older change residences; almost half of those that do remain in the same county.<sup>67</sup> Planning for a rapidly aging population creates thriving communities. It is a tremendous economic opportunity for local governments to create places where older adults can stay to engage with local organizations, businesses, and services.

Forward-thinking efforts to create age-friendly communities include:

- **Macon-Bibb County, Georgia:** A multi-year plan to become more accessible and convenient for older adults. The County supports development and infrastructure that create walkable, multi-modal environments.
- **Atlanta:** The Atlanta Regional Commission's Lifelong Communities Initiative is redesigning neighborhoods with improved housing, transportation, and access to services to enable residents to age in place.
- **Philadelphia:** The City's new 2012 zoning code requires new developments of 50 or more units to include at least 10 percent of "visitable" units – defined as an entrance without steps, a half-bathroom on the first floor, and doors and hallways wide enough for wheelchairs. It also allows ADUs in more areas across the city.

The American Association of Retired Persons (AARP) Network of Age-Friendly Communities works in partnership with the WHO to help American communities prepare for the aging of their populations amid increasing urbanization. In addition to Portland, other U.S. communities large and small that now engage with the AARP and the WHO Global Age-Friendly Cities and Communities include: Philadelphia; New York City; Des Moines, Iowa; Bowling Green, Kentucky; Los Altos and Los Altos Hills in California; Macon-Bibb County in Georgia; and Westchester County in New York.

# Austin

*Developing Complete Communities*



## AUSTIN, TEXAS

### *Developing Complete Communities*

#### AUSTIN AT A GLANCE

**Land Area**

298 square miles

**Population**

820,611

**Population Density**

2,653 people per square mile

**Median Household Income**

\$50,520

**Education**

44% bachelor's or higher

Austin is a vibrant state capital and a renowned scene for music and the arts. It is now America's fastest-growing city, as well as a community that is grappling with the past while striving to create a better future. The past five decades of the city's sprawling development has resulted in inadequate connectivity between Austin's neighborhoods, limited open spaces, deteriorated air and water quality, and public health challenges. Diabetes, heart disease, and lower respiratory diseases now cause nearly one out of three deaths in Travis County. Austin's leaders recognize the power of design to reverse these trends, and its public health officials supported the City's new vision for building healthier communities. In collaboration with Austin's designers and other civic leaders, the City is creating better communities where active transportation and complete neighborhoods enable citizens to pursue a healthier lifestyle.

The City of Austin will reach its 200th anniversary in 2039. This date presents an unparalleled opportunity for Austin's leaders to make a pledge to meet the needs of current and future residents. City leaders have worked collaboratively with community members to imagine a future city where people can live and work while leading healthier, happier lives.

Adopted in June 2012, the City's new Comprehensive Plan, *Imagine Austin*, presents a transformational vision for the city in 2039. Over the next three decades, the Plan's priority programs will create active streetscapes and complete communities by:

- Promoting inter-agency collaboration with the Healthy Austin program;
- Implementing the Green Lanes Project to create a comprehensive bicycling infrastructure;
- Focusing on mixed-use development;
- Revising Austin's land development regulations and processes; and
- Preserving agricultural lands and creating more open spaces.

*Previous page: W Hotel + Residences with Austin City Limits Live at The Moody Theater, Austin; design architect: Andersson-Wise Architects; architect of record: BOKA Powell; image by Jonathan H. Jackson Photography*

Commutes to work that incorporate walking or cycling reduce the risk of cardiovascular disease by 11 percent.<sup>68</sup>



## IMAGINE A CONNECTED AND ACTIVE AUSTIN

Austin is one of six U.S. cities that receive funding and technical assistance for establishing bike lanes through the federal Green Lanes Project. The City is working to incorporate walking and cycling into all new projects and initiatives that involve the built environment. As part of its 2009 Bicycle Master Plan, Austin is spending half a million dollars on bicycle infrastructure. In April 2012, it opened a dedicated green bicycle lane on Rio Grande Avenue, which runs through the city's downtown.

### Transit-Oriented Development

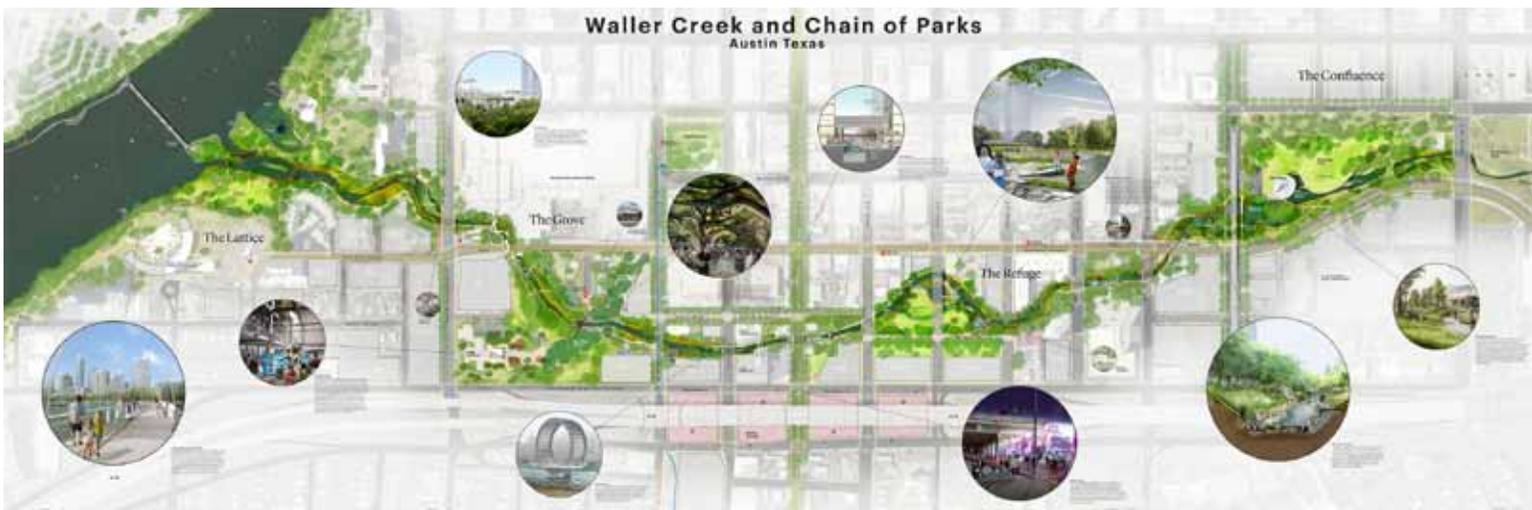
*Imagine Austin* calls on the City to prioritize investments that support mixed-use, transit-oriented, and compact neighborhoods with pedestrian and bicycle-friendly infrastructure. Local leaders are also proposing to develop a new inner-city urban rail line, called MetroRail Green Line, and the Lone Star rail line to improve connectivity across all of Austin's corridors. The recently opened MetroRail Red Line is a key part of the City's new focus on transit-oriented development. It is the first of Austin's major transportation initiatives, but mixed-use communities are already emerging along its route to the east of downtown Austin. With this affordable transportation choice for an area traditionally underserved with public transit, the area's residents can now access better jobs and more amenities like the Sustainable Food Center's traveling farmer's market.

### Active Access to Fresh Foods

*Healthy Austin* is one of the Comprehensive Plan's newly launched priority programs. The initiative aims to improve public health by combining better access to nutritious foods with built environments that provide more opportunities for an active lifestyle. The program will monitor Austin's progress by tracking metrics related to the rates of obesity, chronic diseases, availability of walking and biking trails, and housing opportunities within one-quarter and one-half of a mile from a grocery store or a farmer's market.

### Unique Urban Park Space

With a projected construction budget of \$50-60 million, Austin's Waller Creek district echoes the Highline Park in New York City. It has been called the biggest small creek transformation in the nation. The plan will revitalize this seven-mile stretch of fragmented, polluted, and undervalued land. In the near future, the banks of Waller Creek will host a vibrant civic space covering one tenth of downtown Austin with numerous opportunities for recreation and physical activity.



*Imagine Austin Cover, Austin; Courtesy of the City of Austin. Waller Creek Site Plan, Austin; designed by Michael Van Valkenburgh Associates and Thomas Phifer and Associates*



## TOWARD A COMPLETE AND LIVABLE FUTURE

Austin plans to create a more compact downtown and expand to the East, because its west side includes agricultural lands that have been set aside for preservation. The City's new policies and incentive programs ensure that development projects align with its vision for growth. Among these are:

- Density bonuses for development in the downtown area and adjacent neighborhoods;
- A requirement for sites that are larger than five acres to be broken up in order to provide for neighborhood connectivity;
- Priority funding for projects that adhere to the City's design standards for site and building design that increase open spaces and pedestrian movement while decreasing car traffic;
- Incentives and preference in funding for mixed-use developments; and
- Prioritizing the development of infill housing that complements and enhances the character of existing neighborhoods.



*The Seaholm District in Austin's southwest downtown area embodies the City's vision of a complete community where every Austin resident can enjoy a healthier lifestyle by 2039. At the center of this mixed-use neighborhood, the redeveloped Seaholm Power Plant will be a major civic venue and regional cultural center. The revitalized area will be adjacent to a commuter rail station. It is expected to support more than 200 jobs while generating over \$2 million in annual tax revenues.*

Austin drew on the insights of other municipalities to meet the needs of its residents. The city's new pedestrian streetscapes, bicycle paths, and more livable communities are increasing residents' opportunities for healthy living. Drawing on existing urban and rural social and environmental conditions, they are also creating the community connectivity that will make Austin an even more vibrant cultural center.

*Seaholm District, Austin; architect: TBG Partners. Image Austin Whiteboards, Austin; Courtesy of the City of Austin*

## ACROSS THE UNITED STATES

To create healthier communities, local leaders across the country are increasingly focusing on transit-oriented development and streetscapes that increase access to fresh foods. Among other initiatives are:

- **Arlington County, Virginia:** Arlington has long been a national model for compact transit-oriented development. The County's green building density bonus program awards private development projects that achieve LEED certification levels with additional floor space beyond the amount allowed by the zoning code. Projects that strive for higher levels of certification receive larger bonuses.
- **Bartholomew County, Indiana:** The County is tackling the challenges of obesity and inadequate nutrition through new policies and priorities aimed to improve the built environment. Its Thoroughfare Plan incorporates complete streets. The County is also creating community gardens next to housing developments and community centers in underserved areas.
- **North Little Rock, Arkansas:** The City is creating a comprehensive plan that will help to reverse its high rates of obesity. With a federal grant from the Communities Putting Prevention to Work program, the City adopted a plan to implement complete streets and is working to improve its streetscapes. North Little Rock recently improved pedestrian and mass transit access to the first Arkansas Certified Farmers' Market, which vouches for its products' local source.

America's urban centers are projected to grow much faster than less compact communities. However, communities of all shapes and sizes are experiencing similar public health challenges. The solutions that create healthier environments are also similar across municipalities, both large and small.

# Seattle

*Creating a Health-Promoting EcoDistrict*



## SEATTLE, WASHINGTON

### *Creating a Health-Promoting EcoDistrict*

#### SEATTLE AT A GLANCE

**Land Area**

84 square miles

**Population**

608,660

**Population Density**

7,251 people per square mile

**Median Household Income**

\$60,665

**Education**

55% bachelor's

Local leaders know that America's urban centers are growing, while at the same time they must accomplish more with fewer resources. Municipal governments are seeking to create the places where people want to live, and they are increasingly looking to take advantage of efficiencies that stem from district-scale systems. At the core of this movement is the notion that districts are the best scale to accelerate progress: small enough to innovate quickly, large enough to have significant impact. EcoDistricts are thus rapidly gaining prominence across America in the shape of conceptual and early-stage plans. In essence, these are existing neighborhoods whose residents join with other stakeholders to create more livable places while measuring progress toward their communities' specific goals.

As the incidence of obesity and chronic disease in the U.S. reaches unprecedented proportions, it is critical to see that EcoDistricts offer more than just resource-efficient neighborhoods. They are communities that enable residents to become healthier through better opportunities for physical activity, cleaner air and water, access to fresh foods, civic engagement, and a culture that supports health promotion. The City of Seattle has long been a leader in building better places to live and its vision for the Capitol Hill EcoDistrict is now among the most advanced in the United States.

Seattle's leaders are beginning to build EcoDistricts in the city. As the City was already working to develop better public transit options, the Capitol Hill Housing Authority and civic leaders seized the opportunity to pilot an EcoDistrict around the previously-planned development of six new light rail station sites. With a grant from the Bullitt Foundation in March 2011, Capitol Hill Housing and civic leaders collaborated with GGLO's architects, urban planners, and landscape architects to spearhead the creation of a local EcoDistrict through research, planning, and outreach to a broader group of stakeholders.

Despite the progress on EcoDistricts in other cities, these communities are still a new notion and many of the frameworks for building them do not yet exist. The Capitol Hill EcoDistrict requires new strategies and creative adaptations to current policies and financing mechanisms. It also necessitates interdisciplinary, inter-jurisdictional partnerships. As the light rail stations undergo construction over the next four years, a grassroots coalition will work to establish the Capitol Hill EcoDistrict's management structure, financing model, and policy frameworks.

*Previous page: Gates Foundation  
Atrium, Seattle; architect: NBBJ; photo  
by Benjamin Benschneider.*



Top: Green Roof and Community Gardens at the ASA Flats + Lofts, Seattle; architect: GGLO; photo by Gregg Galbraith. Middle: The Streetcar at the ASA Flats + Lofts, Seattle; architect: GGLO; photo by Gregg Galbraith. Bottom: Rain Gardens at Burien Town Square, Seattle; architect: GGLO; photo by Derek Reeves

## A HEALTHIER COMMUNITY VISION

In many ways, Capitol Hill is already a health-promoting neighborhood. A third of its mixed-use area is non-residential, and it is also one of the most walkable neighborhoods in the city. The concept plan for Seattle's Capitol Hill EcoDistrict creates an even healthier community. The vision for better design will increase physical activity, reduce environmental pollution, improve access to healthier foods, and connect residents with each other and the outdoors. As the EcoDistrict vision evolves, the community will continue to refine its preliminary targets and metrics for measuring the progress toward these goals. Similar to initiatives in other communities, many of these goals are tied to improving mobility, creating inviting outdoor spaces, and constructing greener, healthier buildings with better daylight and indoor air quality. Among its many strategies, the vision for the EcoDistrict proposes to:

- Improve sidewalks, increase way-finding, and slow traffic;
- Potentially require new developments to be certified LEED Gold at a minimum;
- Target large energy users for energy-efficient design;
- Monitor air quality inside and outside buildings to increase awareness of this health issue among residents;
- Increase green walls and roofs, trees, and landscaping in the public rights of way;
- Create community space destinations by developing parks and mini plazas or gardens in underutilized areas;
- Use a park, an underdeveloped site, street trees, or open spaces on a college campus to grow a community orchard;
- Reinforce community identity through neighborhood branding and design guidelines;
- Make the current farmer's market more accessible by relocating it next to the new light rail station sites and establish an urban farm plot around the station area; and
- Guide healthy living through education and training in partnership with local health leaders like Group Health Collaborative, a nonprofit healthcare system.

### Suggested EcoDistrict-Wide Targets

#### Community

- Lower obesity rates
- Increase the number of urban farms and p-patch plots and lower waitlist time
- Increase the amount of locally grown food donated to food banks
- Build new affordable housing near transit stations
- Improve the public realm with more gathering spaces, maximize under-utilized spaces, and re-purpose parking areas for community use

#### Mobility

- Halve per capita daily miles traveled by vehicle by 2030, increase all active transportation trips
- Improve the rate of commuting by bicycle beyond nine percent of total commutes by 2020
- Increase the number of people walking along key pedestrian corridors over the current baseline by 2030
- Halve pedestrian/bike-to-car collisions by 2020

#### Energy

- Design all new buildings to be LEED Gold Certified or Living Building Challenge Certified by 2030
- Incrementally decrease energy use and water use intensity in existing buildings, reaching 50 percent by 2030 by retrofitting 75 percent of buildings that existed in 2011

## Bi-o-phil-i-a

“A complex of weak genetic tendencies to value nature that are instrumental in human physical, material, emotional, intellectual, and moral well-being.”

Stephen Kellert, PhD, *The Biophilia Hypothesis*, 1993



The Bullitt (Cascadia) Center will be the Bullitt Foundation's new home. This six-story, 50,000-square-foot building is projected to open in January 2013 as the most sustainable commercial building in the world. To meet the requirements of the Living Building Challenge, The Miller Hull Partnership's architects worked to avoid using over a dozen chemicals and materials proven harmful to human health. To become among the first certified Living Buildings in the U.S., the Center was also designed to reduce pollution; its design will enable it to use only as much energy and water as it is able to generate onsite.

*Bullitt Center, Seattle; architect: Miller/Hull Partnership; photo by John Stamets for the Bullitt Center*

## A Systems-Level Perspective

The Capitol Hill EcoDistrict offers a broader, more holistic perspective of interconnectivity between health, the surrounding environment, and community. A systems approach to the design of these aspects of urban life exposes the relationships that exist between them, helping the community to identify new opportunities and to make implementation easier, more advantageous, and with greater impact.

With respect to the built environment, the EcoDistrict's equitable housing, numerous public spaces, and community ownership of common goals stimulate health-promoting social interaction, community cohesion, and civic engagement. Scientific inquiry also increasingly shows that our daily contact with natural surroundings has measurable benefits with respect to stress reduction, healing, emotional well-being, learning, and productivity. Beyond better health, the indirect long-term impacts of contact with nature include increased levels of satisfaction with one's home, job, and life in general.

## PROMOTING ECODISTRICTS

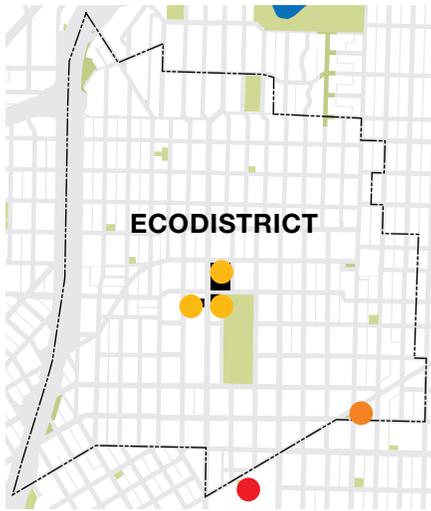
In order to encourage the development of EcoDistricts, municipalities can adapt their current progressive policies to meet an EcoDistricts' specific needs. Among Seattle's goals with the Capitol Hill EcoDistrict is identifying potential changes to the land use code in order to promote vibrant density. As EcoDistricts continue to push the boundaries of current building and zoning policies, local governments should also implement initiatives that give them special flexibility. Seattle is supporting the Capitol Hill EcoDistrict with flexible policies and incentives that promote green, healthier buildings. Among its numerous initiatives are the Priority Green Permit Program and the Living Building Ordinance.

### Priority Green Permit Program

Seattle's Priority Green EXPEDITED program is currently in its pilot phase and offers a faster permit review for all types of new developments that meet certain green building requirements. Applicants receive a single point of contact, assistance by an integrated team of design and permitting staff, priority processing, and an expedited land use and building permit review. For multifamily and commercial projects, the program typically reduces the review time by 25 percent, which can substantially reduce building costs for EcoDistrict projects. The Priority Green FACILITATED program offers similar expedited and facilitated review for innovative projects with potential code challenges, such as those working toward the Living Building Challenge certification. Such expedited review of green projects, which was first developed in Chicago, is becoming increasingly common in cities across the country.

### The Living Building Ordinance

Adopted by Seattle in 2009, this pilot initiative will enable up to 12 "Living Buildings" to be developed through 2014. The City's land use code does not currently allow for some special characteristics required to meet the Living Building Challenge. The Ordinance grants the Department of Planning and Development authority to allow such departures. To encourage better buildings, the City also gives an extra 10 feet of building height to developers who meet at least 60 percent of the requirements for the Living Building Challenge. The Seattle City Council's land use committee can also approve additional height. To better advance innovative design, Seattle may explore a tiered incentive structure for living buildings.



- Station Entry
- Station Area Sites
- EcoDistrict Study Area  
 Capitol Hill and Pike/Pine  
 Urban Center Villages
- Bullitt Center
- Park
- Potential EcoDistrict Partner:  
 Seattle University



EcoDistricts present a tremendous opportunity for local leaders and municipalities all across the United States to create the healthy, thriving communities where people want to live. The public sector can play a vital role in reducing the development risks of EcoDistricts by providing assistance and regulatory certainty throughout the process. Well-managed projects like Seattle’s Capitol Hill EcoDistrict can serve as pilots for systematic reform in regulatory structures.

## ACROSS THE UNITED STATES

Over the past decade, the U.S. Green Building Council’s LEED for Neighborhood Development certification and the EcoDistrict Initiative at the Portland Sustainability Institute’s EcoDistricts Institute (PoSi) emerged as some of the most prominent examples of thought on district-scale systems and partnerships. The process of building EcoDistricts includes three phases: organization, pre-assessment and planning, and implementation/performance monitoring. According to PoSi, most of the EcoDistricts in the U.S. have now progressed through stage one or two, which require significantly less financial investment. However, local leaders can glean significant insight from numerous current pilots such as:

- **Lloyd Crossing Eco-District, Portland:** Among its innovative ideas, the plan introduces pre-development metrics for benchmarking habitat, water, and energy use so that the district can reduce the impact of development over time.
- **Cleveland EcoVillage, Ohio:** A national model for revitalizing an underserved neighborhood around a light rail station with green building, community gardens, and recreational facilities.

Given the rapid acceleration of America’s movement toward EcoDistricts, communities that quickly adopt supporting policies and initiatives will find themselves well ahead of the challenges in promoting public health. EcoDistricts have now developed such a strong identity that even the term itself garners interest from stakeholders who wish to strengthen local communities.

*EcoDistrict Map, Seattle; architect: GGLO.  
 Future Capitol Hill EcoDistrict Conceptual  
 Image, Seattle; architect: GGLO; photo by  
 Courtney Hathaway*

# Conclusion

Community leaders have significant opportunities to improve public health in the coming years. This report is meant to serve as a toolkit for local leaders who would like to implement policies that will help create healthier communities. There are many proactive stances and policy decisions that can be made now to ensure success in the future. Healthier communities are not only imperative for the benefits they bring to citizens, but designing healthier communities creates more economically productive and desirable places to live.

Over half the world's inhabitants currently live in cities; by 2050 this number will rise to 70 percent of the population.<sup>69</sup> Americans are moving back to cities and showing increased preferences for transit-oriented communities, whether in the center-city or suburbs. This rapid pace of urbanization in America and throughout the world presents an opportunity to design healthier built environments that enable efficient use of natural, economic, and human resources.

*Local Leaders – Healthier Communities through Design* seeks to highlight the impressive work taking place at the municipal level. Key themes that have repeatedly surfaced in research and interviews include:

- Mayoral leadership is key to ensuring success;
- Citizen involvement and engagement is necessary;
- Policies must be inclusive of people of all ages and economic backgrounds;
- Cities need to prepare now for future demographic trends;
- Sustainability should be viewed holistically to encompass air and water quality, social equity, and health;
- Mixed-use development and multi-modal transit options improve health outcomes;
- Access to healthy foods must be a part of the overall strategy;
- Today's land use decisions have long-term consequences;
- Architects and design professionals play a significant role in shaping innovative projects;
- Government incentives and market forces have great power to impact development patterns; and
- Collaboration across municipal departments is imperative for success.

Our leaders know that health is a critical concern for the 21st century, not only for our citizens, but also for our economy. The economic costs of unhealthy behavior are enormous and companies want to locate their office space in areas where healthcare costs are lower. Companies also want to locate where they can attract the best employees, who tend to prefer living in urban areas or mixed-use communities in suburban neighborhoods. Given this background, the economics of healthy communities makes sense on several levels.

Seemingly small initiatives in healthy communities can have significant economic benefits. Perhaps the most obvious potential for Americans is reducing the expenses of personal vehicle use. People who choose to live in a community that offers multiple options for traveling to work, grocery stores, and school generally pay a great deal less for transportation costs. Many times these families only

need one car, as opposed to two or three. Not only does this put more money into people's pockets, but it also saves money and time for those commuters who still need to drive. Furthermore, fewer new roads have to be built and maintained, which can focus money toward the construction of additional transit options and infrastructure that could better prepare communities for future change.

Portland demonstrates the sound economics of encouraging a diverse, unconventional approach to development patterns. The city's leaders often speak about the money that is put back in people's pockets when they choose to live in 20 Minute Neighborhoods. The environmental advantages are a clear benefit to all, but economist Joe Cortright also calculates a so-called *Green Dividend* of approximately \$850 million in annual savings for avoided expenditures that residents of Portland do not have to make as a result of living in walkable, mixed-use communities.<sup>70</sup> The development of walkable neighborhoods also reduces noise pollution and the number of auto injuries and accidents – outcomes that are no-brainers for increasing housing values and livability.

America's population is growing older and the increased need for age-friendly design is paramount. Communities should be accessible for people of all abilities to live healthy and productive lives. Policies that enable people to age in place benefit not only the aging residents themselves, but foster a richer community for all members of the city or town. Creating communities where the aging adults can stay active on streets is also a significant economic and retail opportunity.

More and more municipalities are incorporating age-friendly solutions into local policy, although opportunities for improvement are still significant. In 2010, the National Association of Area Agencies on Aging released a nationwide survey that demonstrated:

- 67 percent of communities in the U.S. had a master plan embodying the vision of planning for the aging of their population;
- 56 percent had building codes that incorporate elements of universal design in new construction;
- 54 percent had zoning laws that are supportive of complete streets; and
- 44 percent had zoning requirements that support active lifestyles and aging in place, such as mixed-use development and higher density.<sup>71</sup>

Designing more age-friendly communities includes a focus on strategies like accessory dwelling units, public transportation options, and mixed-use development. These choices – as well as incorporating universal design and many other age-friendly solutions into homes – will pay dividends in the future as the majority of the general population ages. However, as an additional benefit, age-friendly community strategies positively affect everyone in a city, regardless of circumstances.

Municipalities have the opportunity to focus design and development in healthier ways. Where there are opportunities for local governments, naturally there are also chances to miss out. Development patterns reflect market forces, but community leaders who plan ahead of trends are often better prepared to reap potential benefits. Local economic development is extremely competitive, with many communities devoting limited resources to draw people into their city or town. The great thing about specifically designing for health is that its embrace of progressive planning approaches – sustainable, accessible, multi-modal, mixed-use development that is protective of good air and water quality – relies in large part on the same methods that have already demonstrated success across the country.

Collaboration across public sector agencies is critical to creating healthier communities. Municipal public health departments have been taking a leadership role in the creation of healthier buildings and urban environments. Many of the country's progressive initiatives have been supported by the Centers for Disease Control and Prevention, so local communities should see this as an opportunity to compete successfully for federal funding. Choosing not to invest in safe and complete streets, compact urban design, and affordable housing equates to positioning the community for failure in

the mid- and long-term future. Those cities would then likely have to scramble to meet anticipated regulations and accommodate the aging population, while missing out on funding and investment. State governments and federal agencies will give funding preference to communities that can effectively demonstrate their commitments to creating healthier urban environments.

One of the greatest benefits that healthy, livable communities provide is choice. Currently, people throughout most of America have one choice – live in a sprawling, low-density community and drive a car to every destination. While development patterns are starting to self-correct in some parts of the country, most Americans do not have the choice of whether they would like to drive, walk, bike, or take transit to work. Like the rest of the world, America has embraced an urban-focused future and sprawl is on the decline. Between 2000 and 2010, primary growth occurred in the densest quintile of American counties, with losses of approximately two percent in the least dense quintile.<sup>72</sup> Mixed-use, sustainable development and the design of buildings for health are important strategies that can move America's communities successfully into the future.

## THE AIA'S COMMITMENT

Design and health is a key initiative at the American Institute of Architects. Architects can make a difference by serving as creative collaborators who work with stakeholders in planning, public health, and other disciplines to design a healthier future. The AIA has developed a Clinton Global Initiative (CGI) Commitment to Action called *The Decade of Design: Global Urban Solutions Challenge*, which seeks to support this work by working with schools of architecture and others outside academia to develop solutions for cities focused on the intersection of design and public health. The AIA is partnering with the Massachusetts Institute of Technology (MIT) Center for Advanced Urbanism to advance this effort, footing urban design, architecture, and planning on contemporary insight about public health. This project uses cities and urban environments as a laboratory for research, analysis, speculation, invention, and ultimately the development of sustainable models of urbanism centered on health metrics. Through research, community participation, and action, this CGI Commitment will develop long-range solutions for cities that want to design better, healthier places.

Let's imagine a future where designing for health is just the way design is done. Let's imagine a time where all Americans feel they live in places where children can safely walk or bike to school, parents can ride good public transportation to work, people of all abilities can live in well-designed single- and multi-family houses, a quick walk replaces a quick ride to the grocery store, and automobiles become one option among many transit choices. In this future, grandparents will also be able to age near their family. And perhaps, we will all lose just a little bit of weight, not by drastic changes, but by using design to make healthier choices easy.

This future exists now in some places, but all too often the benefits of a transit-accessible, well-designed, healthy community are mostly available to those of higher income. It's a classic example of how scarcity can create a large premium. Social equity, among a multitude of other considerations, demands we find broad-scale solutions to make this type of development available to everyone. Good public policy is the solution. Mobilizing people to make their lives better can build large-scale momentum for change in current policies. Civic engagement is key to finding a workable solution that benefits people at the individual level, family level, neighborhood level, city level, county level, state level, and, finally, the national level. Design for health is an obvious solution. Let's all work together to make it happen.

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